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INFANTRY SCHOOL QUARTERLY

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NEW AIRBORNE INFANTRY REGIMENT

PAGE 9

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QUARTERLY

INFANTRY SCHOOL QUARTERLY

The latest thought on infantry, by the instructors of The Infantry School.

Commandant
Major General Withers A. Burress

Assistant Commandant
Brigadier General J. S. Bradley

THE INFANTRY SCHOOL, FORT BENNING, GEORGIA

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READABLE WRITING: AN EDITORIAL

The Infantry School certainly agrees with the INFANTRY JOURNAL about readable writing. In its December issue the JOURNAL has a fine editorial on this subject—one that any officer can read with profit.

All officers write, whether a letter to somebody's parents, a field order, or a field manual. But how many write simply and naturally? Too few, we say. Too many have the idea that official writing loses dignity unless it is stiff, formal, and verbose. Our official writing is stuffed with such outrages as this: "In the event of inclement weather, or when the weather appears to threaten inclemency, the troops will wear raincoats as previously directed for such circumstances." This is gobbledygook in all its glory. Why not say, "In inclement weather the men will wear raincoats."

The best writing is always simple. Those who like dignity can remember this—simplicity *is* dignity.

THE EDITOR

New Organization of the Airborne Infantry Regiment

Compiled by Major John W. Urban, Infantry

Numerous major changes have been made since the war in the tables of equipment and organization of the airborne division. All the changes have had one objective: the correction of organizational deficiencies that the test of war revealed in all airborne units. This article discusses the organization and equipment of the major fighting element of the airborne division, the airborne infantry regiment, as established by the latest T/O&E, that of June 1949.

The airborne regiment's dependence on powered aircraft and gliders to transport its men and equipment into the combat areas limits the types of equipment included in the T/O&E. Everything in the new airborne regiment can be landed by glider, and much of it can be dropped by parachute.

Perhaps the most outstanding of the post-war changes made in the organization of the airborne division was the conversion of the old parachute and glider infantry regiments to three *airborne* regiments. During the war, both parachute and glider regiments were organic to the division; each was organized under a different T/O&E, each was equipped differently, and each trained differently. The parachute regiment was a light organization that, with the exception of its vehicles, could be dropped by parachute. The glider regiment, with its heavier equipment, was along more conventional lines and was used in a reinforcing role. Because of these differences between his regiments, it was hard for the division commander to employ his units flexibly. Now with three airborne regiments trained in both parachute and glider landing technique, the division is more flexible, since any one or all of the regiments can be sent into an airhead either by parachute or glider.

The present airborne regiment is a well-balanced organization with a strong combat echelon and enough service personnel to administer to the needs of the combat troops. Within weight limitations the airborne regiment is organized like the infantry regiment, since their missions are the same once the airborne regiment has landed and assembled. (See Chart I.)

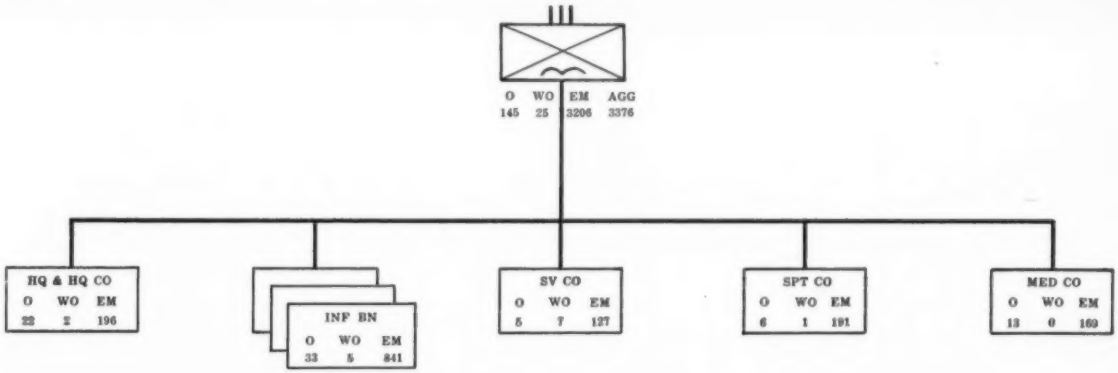
The airborne regiment has the mission of any infantry unit — to close with the enemy by fire and maneuver, to capture or destroy him, or to repel his assault by fire and close combat. Regimental units can provide a base of fire and a maneuver element, can seize and hold terrain, can maneuver in all types of terrain and climatic conditions, and can provide their own antitank protection, communication, reconnaissance, medical service, and organizational supply and maintenance. In addition, the airborne regiment is able to make assault landings by parachute or glider.

The *airborne regiment* has a regimental headquarters and headquarters company, a service company, a medical company, a support company, and three airborne infantry battalions. The regimental strength is 145 officers, 25 warrant officers, and 3206 enlisted men.

The *headquarters and headquarters company* of the regiment provides command, staff, and communication services, for the regiment, and antitank mine protection. It can also obtain counterfire data, and provide security for the regimental command post. (See Chart II.)

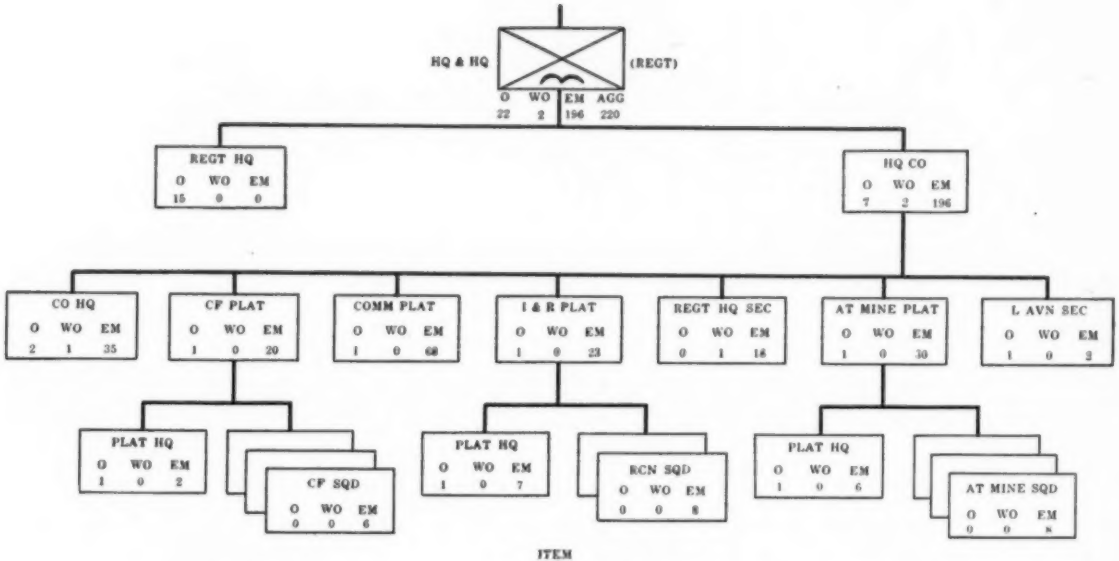
The company is subdivided into a *regimental headquarters* and a *headquarters company*. The 15 headquarters officers are the command and staff personnel in the regiment. In the headquarters company there is a company headquarters (two officers, one warrant officer, and 35 enlisted men,) which includes the company commander (who is also headquarters commandant), the first sergeant, cooks, drivers, maintenance men, and filler personnel. This unit administers the regimental headquarters and headquarters company and moves the regimental CP.

The one warrant officer and 18 enlisted men of the *regimental headquarters section* assist the regimental com-



ITEM	
Airplane, liaison	1
Carbine, cal .30, M2	900
Gun, machine, cal .30, M1917A1	12
Gun, machine, cal .30, M1919A6	39
Gun, machine, cal .50, M2, HB	43
Gun, submachine, cal .45, M3A1	4
Howitzer, 105-mm, M2A1	6
Launcher, rocket, 2.36-inch, M18	27
Launcher, rocket, 3.5-inch, M29	56
Mortar, 60-mm, M19	27
Mortar, 81-mm, M21	12
Mortar, 4.2-inch, M2	8
Pistol, automatic, cal .45, M1911A1	424
Rifle, automatic, cal .30, M1918A1	81
Rifle, cal .30, M1	1787
Rifle, cal .30, M1C (snipers)	81
Rifle, 57-mm, M18	27
Rifle, 75-mm, M20	12
Trailer, ¼-ton	89
Trailer, 1-ton	65
Trailer, water tank, 250-gal	11
Truck, ¼-ton, M38	145
Truck, ¾-ton, cargo, M37	33
Truck, ¾-ton, cargo, M37, w/wn	7
Truck, 2½-ton, cargo	4
Truck, 2½-ton, cargo, w/wn	64

Chart 1.



ITEM		ITEM	
Airplane, liaison	1	Rifle, cal .30, M1	122
Carbine, cal .30, M2	88	Trailer, ¼-ton	14
Gun, machine, cal .50, M2, HB	3	Trailer, 1-ton	5
Gun, submachine, cal .45, M3A1	4	Trailer, water tank, 250-gal	1
Launcher, rocket, 3.5-inch, M20	4	Truck, ¼-ton, M38	31
Pistol, automatic, cal .45, M1911A1	8	Truck, ¾-ton, cargo, M37, w/wn	5
		Truck, 2½-ton, cargo, w/wn	4

Chart 2.

mander and staff. Included are the regimental sergeant major, the operations sergeant, the intelligence sergeant, the I & E specialist, the athletic instructor, and the clerks and draftsmen. These men, with the 15 officers in regimental headquarters, make up the command and staff group that controls the regiment.

The *intelligence and reconnaissance platoon* has one officer and 23 enlisted men assigned to a platoon headquarters and two reconnaissance squads. Besides reconnoitering, the I & R platoon mans the regimental observation posts.

The *communication platoon* (one officer and 68 enlisted men) gives the regiment communication of all types—radio, wire, messenger, and pyrotechnic. Based on the recommendations of the regimental communication officer (a member of regimental special staff), the headquarters company commander supervises the operation of this platoon through its platoon leader.

The *counterfire platoon has one officer and 20 men.* Through its three counterfire squads it locates enemy weapons installations. It transmits this information to the mortars of the support company to bring counterbattery fire against the enemy weapons. The platoon is organized exactly like the counterfire platoon of the standard infantry regiment and has the same special equipment to locate enemy weapons.

The *antitank mine platoon* has one officer and 30 men. The three antitank mine squads of this unit lay mines on the regimental front with assistance, as needed, from troop units.

The *light aviation section* has one officer and two enlisted men. It has a liaison airplane for visual reconnaissance of the battlefield, for photographic reconnaissance, and in some cases to transport the commander and his staff. The liaison airplane may be flown into the airhead with the slower troop carrier elements such as the gliders.

Note that in the headquarters and headquarters company of the airborne regiment there is no security platoon as found in the infantry regimental headquarters and headquarters company. The infantry regiment's security pla-

toon is the regiment's MP force since it guards and escorts PW's, marks routes for regimental road movements, and provides security for the CP. A unit with these functions would be desirable within the airborne regiment, but since every additional man requires space in an airplane, this unit is eliminated to keep aircraft requirements at a minimum. As was the case in the infantry regiment before the security platoon became organic, these duties in the airborne regiment are performed by other personnel.

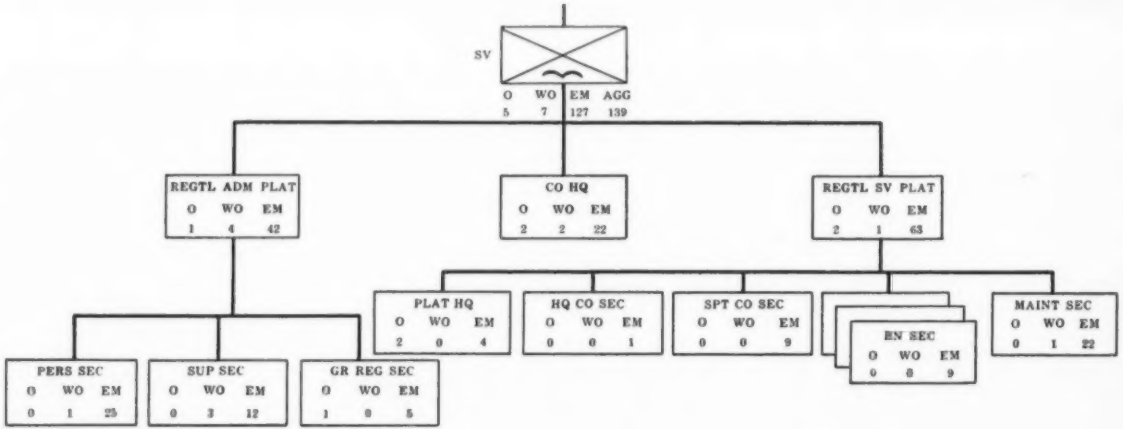
The *service company* furnishes personnel, supply, and graves registration service and performs organizational motor maintenance and supply functions for all units of the regiment. It receives and distributes supplies and operates and controls regimental supply points and the train bivouac. To perform its varied jobs, it has 5 officers 7 warrant officers, and 127 enlisted men. (See Chart III.)

The service company is organized into a company headquarters, a regimental administrative platoon, and a regimental service platoon. *The company headquarters* has two officers, two warrant officers and 22 enlisted men. Officer personnel includes the regimental S-4, the company commander, a supply warrant officer, and an administrative warrant officer. Enlisted men include, in addition to the first sergeant, mess steward, and supply sergeant, communication personnel, cooks, drivers, and fillers.

The *regimental administrative platoon* has one officer, four warrant officers, and 42 men. It is composed of a personnel section (mail clerks, casualty clerks, and administrative technicians), a supply section that operates regimental supply installations, and a graves registration section. This section is only a record keeping unit, as it does not have enough men to bury the dead.

The *regimental service platoon*, with its two officers, one warrant officer, and 63 men is made up of the supply sections for the battalions, the headquarters company, and the support company; and the maintenance section for field maintenance of vehicles organic to the regiment.

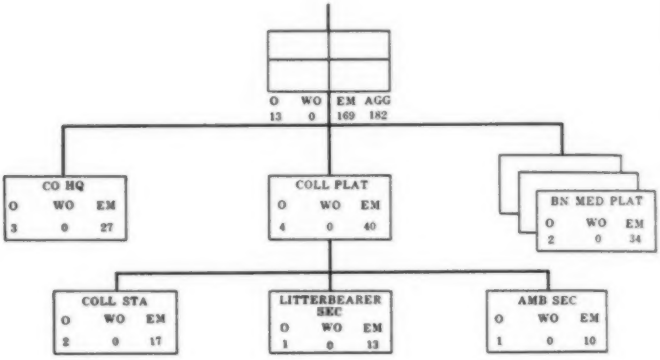
The *medical company* provides medical service by giving emergency medical treatment. It establishes and operates



ITEM	
Carbine, cal .30, M2	28
Gun, machine, cal .50, M2, HB	9
Launcher, rocket, 3.5-inch, M20	10
Pistol, automatic, cal .45, M1911A1	1
Rifle, cal .30, M1	110
Trailer, ¼-ton	5
Trailer, 1-ton	24
Trailer, water tank, 250-gal	7
Truck, ¼-ton, M38	7
Truck, ¾-ton, cargo, M37, w/wn	2
Truck, 2½-ton, cargo, w/wn	34

Chart 3.

the aid stations and a collecting station for receiving, sorting, and giving temporary care to casualties. It removes casualties by litter or ambulance to battalion aid stations and to the collecting station; and it provides continuous medical care during evacuation from battalion aid stations to the collecting station. It only performs these duties for units organic to the airborne regiment; it needs additional medical personnel if attachments are made to the regiment. In many cases these additional aid men may be organic, or attached to units which are attached to the airborne regiment, as is the case in the most frequent attachment—the artillery battalion. (See Chart IV.)



ITEM	
Trailer, ¼-ton	6
Trailer, 1-ton	2
Trailer, water tank, 250-gal	2
Truck, ¼-ton, M38	14
Truck, ¾-ton, cargo, M37	5
Truck, 2½-ton, cargo	4

Chart 4.

The airborne medical company has 13 officers and 169 men, and is composed of a company headquarters, a collecting platoon, and three battalion medical platoons. The *company headquarters* includes a Medical Corps major who is the company commander; a captain, Medical Service Corps, who is the administrative officer; and a lieutenant Medical

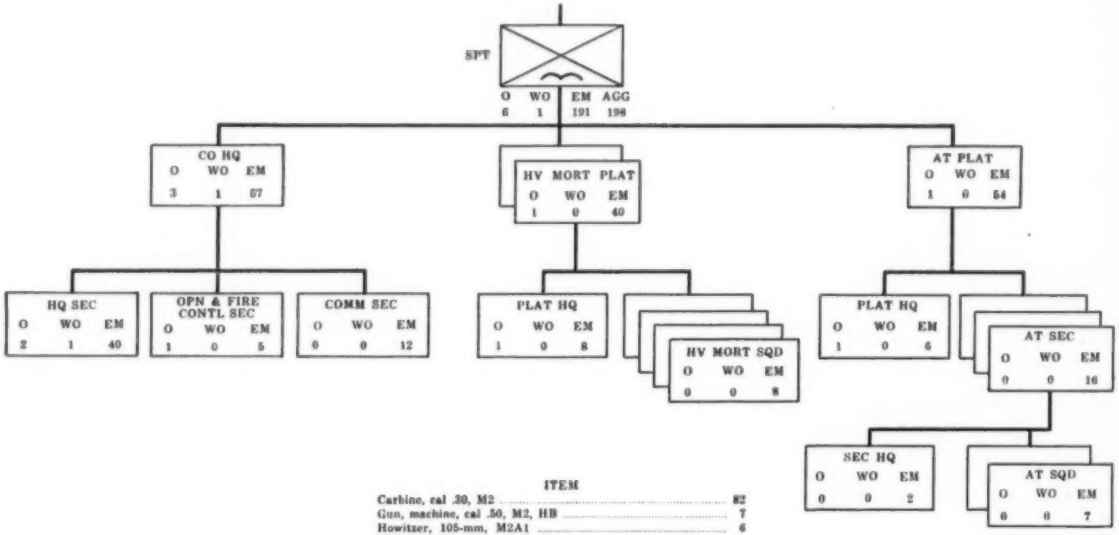
Service Corps, who is the mess, supply, and motor officer; a first sergeant; mess steward and other mess personnel; and the clerks, mechanics, and fillers. The *collecting platoon* operates a collecting station to which casualties are evacuated from the units of the regiment for emergency treatment and prepared for further evacuation; a litterbearer section which removes casualties from aid stations to the collecting station; and an ambulance section which is equipped with nine ¼-ton ambulances for evacuation of casualties from battalion aid stations to the collecting station. Each of the *three battalion medical platoons*, has two medical officers and 34 men. A medical platoon attached to each infantry battalion supplies the company aid men, a battalion aid station, and litter bearers to evacuate casualties from the battlefield to the battalion aid station.

The *support company* is another separate company in the airborne regiment. It has no counterpart in the infantry regiment. It is an organization dictated by necessity, which provides plenty of fire power. The airborne regiment cannot transport tanks because of their prohibitive weight. Since there is no armored support in the airborne regiment, the next best thing is to provide antitank defense by including an *antitank platoon* in the support company. Further support for the regimental units comes from the two heavy mortar platoons.

The *support company's* strength is six officers, one warrant officer, and 191 men. (See Chart V.)

The company headquarters has a headquarters section with the usual overhead personnel, an operations and fire direction section, and a communications section. Each of the two heavy mortar platoons has four 4.2-inch mortar squads—a total of eight mortars in the company. This is less than the number in the infantry regiment, but is believed sufficient to take care of the regiment's needs. Even these eight mortars will be difficult to supply with ammunition in an airborne operation.

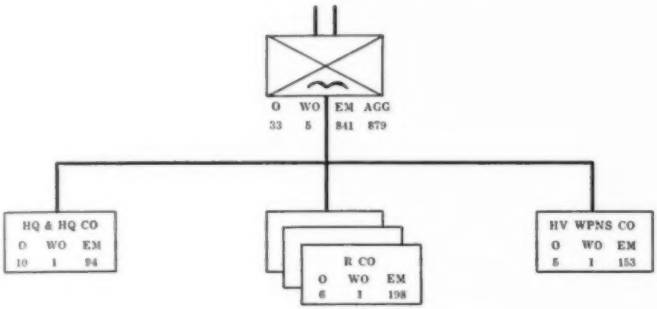
The *antitank platoon* has three sections, each with two squads. The platoon has six standard 105-mm howitzers for direct antitank fire. This is an interim weapon until a better antitank gun can be developed to replace it.



ITEM	
Carbine, cal .30, M2	82
Gun, machine, cal .50, M2, HB	7
Howitzer, 105-mm, M2A1	6
Launcher, rocket, 3.5-inch, M20	9
Mortar, 4.2-inch, M-2	8
Pistol, automatic, cal .45, M1911A1	28
Rifle, cal .30, M1	88
Trailer, ¼-ton	7
Trailer, 1-ton	13
Trailer, water tank, 250-gal	1
Truck, ¼-ton, M38	12
Truck, ¾-ton, cargo, M37	13
Truck, 2½-ton, cargo, w/wn	8

Chart 5.

The *airborne infantry battalion* has 33 officers, five warrant officers, and 841 men. It has a battalion headquarters and headquarters company, three rifle companies, and a heavy weapons company. (See Chart VI.) This battalion has the same mission as any infantry unit.

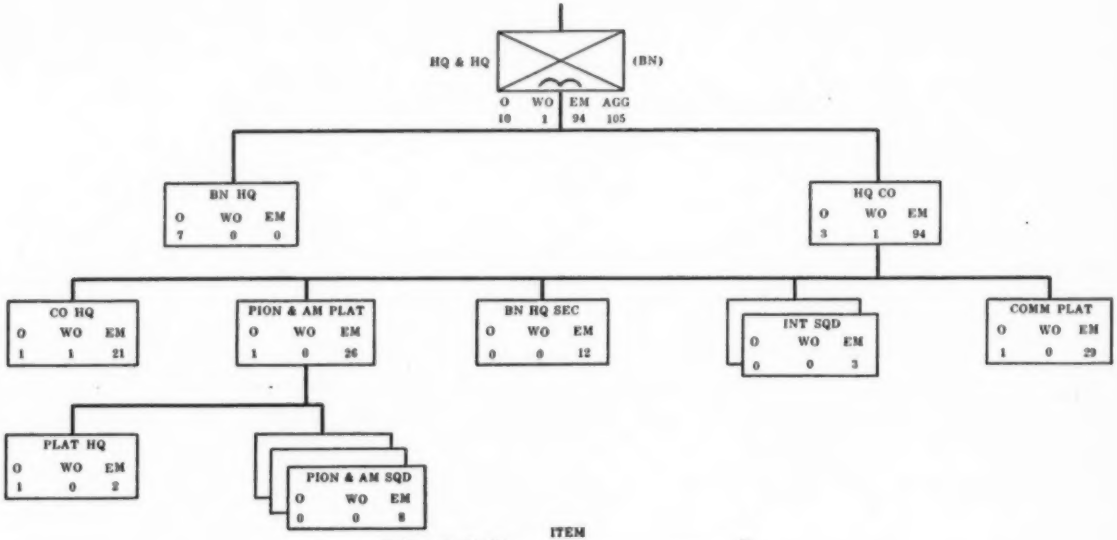


ITEM	
Carbine, cal .30, M2	234
Gun, machine, cal .30, M1917A1	4
Gun, machine, cal .30, M1919A6	13
Gun, machine, cal .50, M2, HB	5
Launcher, rocket, 2.36-inch, M18	9
Launcher, rocket, 3.5-inch, M20	11
Mortar, 60-mm, M19	9
Mortar, 81-mm, M21	4
Pistol, automatic, cal .45, M1911A1	129
Rifle, automatic, cal .30, M1918A1	27
Rifle, cal .30, M1	489
Rifle, cal .30, M1C (snipers)	27
Rifle, 57-mm, M18	9
Rifle, 75-mm, M20	4
Trailer, ¼-ton	19
Trailer, 1-ton	7
Truck, ¼-ton, M38	27
Truck, ¾-ton, cargo, M37	5
Truck, 2½-ton, cargo, w/wn	6

Chart 6.

The *battalion headquarters and headquarters company* comprises command, staff, administration, maintenance, supply, reconnaissance, communication, and pioneer personnel. (See Chart VII.)

The *battalion headquarters* has seven officers—the commander and his staff. *Headquarters company* has three officers, one warrant officer, and 94 men. The company headquarters (one officer, one warrant officer, and 21 men) includes the company commander, the motor officer, the first sergeant, mess personnel, drivers, maintenance men, order-



ITEM	
Carbine, cal .30, M2	55
Gun, machine, cal .50, M2, HB	3
Launcher, rocket, 3.5-inch, M20	6
Pistol, automatic, cal .45, M1911A1	2
Rifle, cal .30, M1	48
Trailer, ¼-ton	5
Trailer, 1-ton	1
Truck, ¼-ton, M38	8
Truck, ¾-ton, cargo, M37	2
Truck, 2½-ton, cargo, w/wn	2

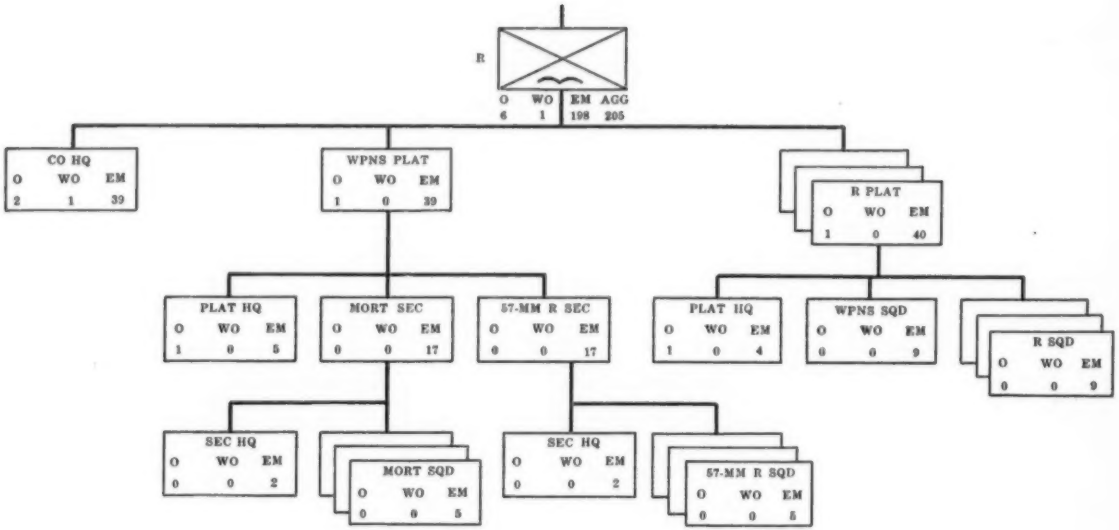
Chart 7.

lies, and fillers. The battalion headquarters section includes the enlisted specialists who are assistants to the commander and his staff. The communication platoon contains wiremen, code clerks, repairmen, messengers, and radio operators. The three-squad pioneer and ammunition platoon is the battalion commander's engineer detachment. This platoon does pioneer work, assists in handling ammunition, and even carries it forward to using units. Members of the two intelligence squads are trained as scout-observers and are used to man the battalion observation posts.

The three rifle companies in the battalion each have six officers, one warrant officer, and 198 men. (See Chart VIII.)

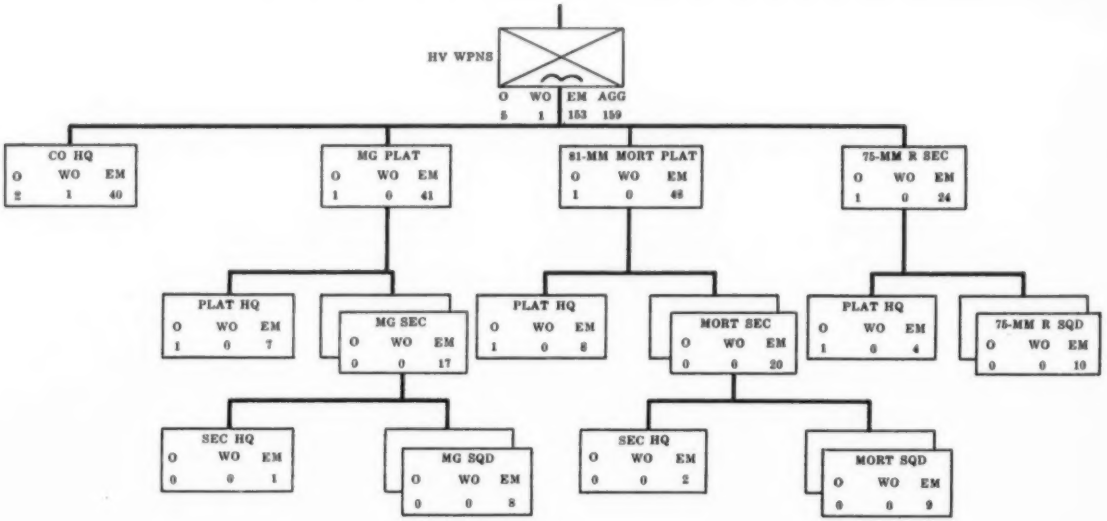
The rifle company can close with the enemy and destroy him by fire and maneuver; repel enemy assaults by fire, close combat, or counterattack; maneuver in all types of terrain and climatic conditions; furnish a base of fire; seize and hold terrain; and parachute or land by glider in enemy rear areas. In addition to a headquarters, the company has three rifle platoons and a weapons platoon. Each *rifle platoon* has three rifle squads and a weapons squad. The *weapons platoon* has a 60-mm mortar section (three mortars), and a 57-mm recoilless rifle section (three 57-mm rifles). The rifle and weapons platoons of the airborne rifle company are exactly the same as those of the infantry rifle company.

The *airborne heavy weapons company* has five officers, one warrant officer, and 153 men. It is organized into a machine gun platoon, an 81-mm mortar platoon, and a 75-mm recoilless rifle section. (See Chart IX.) It gives continuous close fire support to the battalion and can deliver heavy direct or indirect fire against enemy personnel, vehicles, and installations by day or night. It furnishes antitank protection and can make rapid tactical movements. Like the other units in the airborne regiment, it lands either by parachute or glider. With the exception of the company headquarters which has seven fewer men than the company headquarters of the heavy weapons company of the infantry battalion, the units of this company are exactly the same as their counterparts in the infantry heavy weapons company.



ITEM		ITEM	
Carbine, cal .30, M2	35	Rifle, cal .30, M1	128
Gun, machine, cal .30, M1919A6	3	Rifle, cal .30, M1C (snipers)	9
Gun, machine, cal .50, M2, HB	1	Rifle, 57-mm M18	3
Launcher, rocket, 2.36-inch, M18	3	Trailer, ¼-ton	2
Mortar, 60-mm, M19	3	Trailer, 1-ton	1
Pistol, automatic, cal .45, M1911A1	33	Truck, ¼-ton, M38	2
Rifle, automatic, cal .30, M1918A2	9	Truck, 2½-ton, cargo, w/wn	1

Chart 8.



ITEM		ITEM	
Carbine, cal .30, M2	74	Rifle, cal .30, M1	57
Gun, machine, cal .30, M1917A1	4	Rifle, 75-mm, M20	4
Gun, machine, cal .30, M1919A6	4	Trailer, ¼-ton	8
Gun, machine, cal .50, M2, HB	2	Trailer, 1-ton	3
Launcher, rocket, 3.5-inch, M20	6	Truck, ¼-ton, M38	13
Mortar, 81-mm, M21	4	Truck, ¾-ton, cargo, M37	3
Pistol, automatic, cal .45, M1911A1	28	Truck, 2½-ton, cargo, w/wn	1

Chart 9.

In summary, many of the units and even more of the component elements of these units are the same in both the airborne and infantry regiments. In time, as larger and better parachutes, gliders, and powered aircraft are developed, the number of significant differences between the two types of infantry units will grow smaller.

Units which are the same in airborne and infantry regiments are: In regimental headquarters and headquarters company:

- Regimental headquarters section
- Counterfire platoon
- Antitank mine platoon

In service company:

- Supply section
- Graves registration section
- Platoon headquarters, regimental administrative platoon
- Headquarters company section
- Battalion sections

In the medical company:

- None

In the support company:

- Heavy mortar platoon

In battalion headquarters and headquarters company:

- Battalion headquarters
- Battalion headquarters section
- Pioneer and ammunition platoon

In the rifle company

- Rifle platoon
- Weapons platoon

In the heavy weapons company:

- Machine gun platoon
- Mortar platoon
- 75-mm rifle *section*, which is organized the same as the 75-mm rifle platoon in the infantry heavy weapons company.

There you have the new airborne regiment—hard-hitting, able to land by parachute or glider—almost a counterpart of the infantry regiment except for the lack of armored firepower.

Arctic Clothing For The Soldier

Compiled by Captain Thomas E. Lawrence, Infantry

If our armies are to fight in the Arctic, they cannot survive without the proper clothing. Not only must their clothing be warm—it must be sufficiently light to give the soldier mobility. He cannot move, he cannot fight unless his clothing provides both warmth and mobility.

In recent years the emphasis at Army Field Forces Board No. 3 at Fort Benning has been on the development of suitable clothing—clothing that will make possible military operations in the bitter cold of sub-zero temperatures.

When the Army first went into the Arctic, it had no preconceived idea of what the soldier should wear. It looked at the native and the sourdough, and it arrived at the principle of layer insulation; that is, the adding of layers of clothing so that still air would be trapped between the successive layers. The Army found that this principle was correct, but with limitations. When a man got on enough clothes to protect himself from the cold, he found that he was so burdened that he couldn't move.

And so we began to think of lighter clothing—something that would give more insulation and still allow for considerable freedom of movement.

Skins—much as the Eskimos use—were not the answer. There are several reasons for this. Perhaps the primary reason is that there are not sufficient skins available. Another reason is that the soldier's clothing must protect him over a wide range of temperature, which is not the case with the skin-clad Eskimo who remains in his body-heated igloo during very severe weather. The soldier, on the other hand, may have to expose himself for prolonged periods in the worst kind of weather; and then, when the necessity is over, he will probably go to a shelter which is

artificially heated and considerably above the temperature of an igloo. This heat presents another problem—sanitation. Skin clothing exposed to warmth is extremely odorous and is difficult to clean.

One of the most promising developments in Arctic clothing is the use of fiberglass as the insulating medium. It has been found that it is not the material in a garment that makes it warm. For instance, a woolen garment is not warm because it is made of wool; it is warm because small globules of air are trapped between the wool fibers. This air, being still, provides insulation. This is the principle of fiberglass. The little fibers of spun glass trap uniformly-sized air bubbles between them. And fiberglass is *light*.

In the development of Arctic clothing, constant and unremitting thought is given to the *fit* of each item being tested. Inadequate insulation is fatal; a poorly fitted garment will cause frostbite and probably loss of limb or life. Intensive research has been and continues to be made on the configuration of the body and its relation to the design of Arctic clothing.

Let us now consider the Arctic clothing in detail, starting first with the layer next to the skin and working out to the complete Arctic uniform. You probably recall the old "longies" and remember how tightly they fitted over your body, particularly at the knees and the seat. And you may remember what a nuisance that trap door in the seat was. Task Forces Frigid, Williwaw, and Frost went to the field for Army Field Forces in the winter of 1946-47. Frigid conducted tests at Fairbanks, Alaska; Williwaw at Adak in the Aleutians; and Frost at Camp McCoy, Wisconsin. They found that the longies were so tight at some parts of the body that actual constriction of the flesh and consequent loss of blood circulation occurred. As circulation went, so went the warmth in the particular part of the body. And so with this in mind Field Forces Board No. 3 and the Quartermaster designed and developed the underwear you see in Figure 1, below.

This underwear is called Arctic pajama-type. Notice how loose-fitting it is. This looseness eliminates virtually all

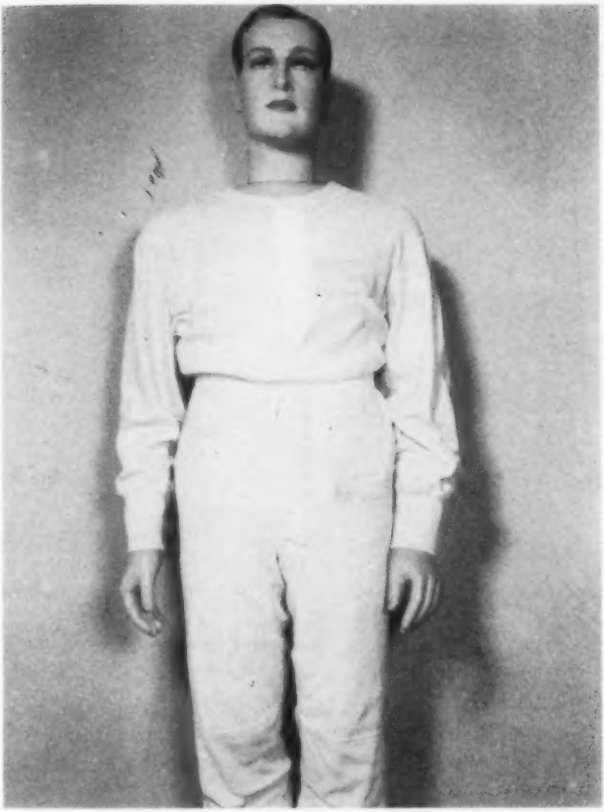


Figure 1. Undershirt and Drawers, Pajama-type.

flesh constriction and captures the first air layer next to the skin. The two-piece idea does away with the old trap door in the rear. Along with the fiberglass ensemble, this underwear was tested last winter in Alaska by the Arctic Test Detachment of Board No. 3. It was found highly satisfactory and has since been standardized.

The next layer of insulation is called the intermediate uniform. It is shown in Figure 2, and is worn directly over the underwear. The jacket and trousers have removable

fiberglass liners for insulation. Each liner is made by sandwiching a fiberglass bat between two layers of nylon, the whole then being quilted to hold the fiberglass in place.

Figure 2. The Intermediate Uniform, Fiberglass Insulated, and the Fiberglass Lining.

In Figure 3, you see the shell leather gloves. They are worn with wool inserts whenever work with the hands is required.

Figure 4 shows the fabric cap, which is similar to the cotton field cap the main difference being the addition of blanket-lined ear-flaps and a forehead strip for protection. When worn with the hood (see Figure 5) this cap proved satisfactory—with minor exceptions—in all weather conditions encountered during last winter's tests.

Footgear for the Army in the Arctic has always been a perplexing problem. The native wears the mukluk. But when the Army tried this in the winter of 1946-47, the test personnel complained bitterly about lack of traction and arch support—for the mukluk is nothing more or less than a smooth-soled moccasin with a high top. The felt boot has been for many years a favorite of people who live in sub-arctic areas. When the task forces tried some

Figure 3. Shell Leather Gloves with Wool Inserts.

Figure 4. Arctic Fabric Cap.

Figure 5. The Hood—Open, and the Hood—Closed.

commercial models, however, they found that these lacked durability and traction because of a felt outer sole. Again, Army Field Forces Board No. 3 devised the military characteristics of an Arctic felt boot, and the Quartermaster developed the boots shown in Figure 6. These boots were tested last winter and proved better than anything previously tested in a comparative sense. As with other items of clothing, they were not without their deficiencies, and their development is continuing.

Considered as a whole, the intermediate uniform and the felt boot proved generally satisfactory in the tests. While definite temperature limitations were not established, the uniform was adequate down to −40°F. However, for a soldier to keep his feet warm with these felt boots, he had to keep moving. If he remained inactive for any length of time, depending on the temperature, his feet got cold. The soldier can regulate warmth by the amount of socks he wears. Normal footwear is two pairs of wool ski socks over one pair of wool cushion sole socks. (Refer to Figure 6.)

The third and final layer of insulation is called the outer uniform. (See Figure 7.) It consists of parka and trousers, and is worn directly over the intermediate uniform when conditions warrant it. Actually, the intermediate uniform proved so effective that the outer uniform was seldom used during last winter's tests. The parka and trousers

Figure 6. Arctic Felt Boot and Wool Ski Socks.

are lined with buttoned fiberglass liners. The trousers have bell bottoms so that they may be pulled over the footgear. This allows an individual to remove the outer trousers conveniently and move around in heated shelters in his intermediate trousers. Wearing the outer trousers, he would suffer from the heat.

Notice the hood of the parka. It has a tubular hood extension to the face opening which terminates in a fur ruff. This arrangement gives the wearer complete protection from the elements or, if he desires maximum observation, he may roll the extension back around the face opening. (Refer to Figure 5 - The Open and Closed Hood.) Moreover, the fur ruff has a soft wire in it that enables

the wearer to shape the face opening to suit his needs. If the wearer narrows the opening to a point where the tips of the hairs meet, he can face virtually any condition of wind or temperature without chilling or frosting any part of his face—and he can still see to a limited degree.

The handgear shown in Figure 8 is the Arctic mitten which, as shown, is worn over the woolen finger insert mitten. The Arctic mitten has a leather palm and a pile back. The pile back makes a very handy cheek warmer.

Figure 7. The Outer Uniform.

The mitten is lined with a removable combination wool and fiberglass liner. A suspension tape is provided so that one does not lose a mitten in the snow when he takes it off. This particular model revealed a few deficiencies when tested, and an improved version will be tested this winter along with other test items at the Arctic Test Branch, Big Delta, Alaska.

Figure 8. Arctic Mitten and Trigger Finger Inserts.

The footgear shown in Figure 9 is the experimental Arctic mukluk. The sole is made of cold weather rubber—a rubber that does not get stiff in low temperatures—and has a built-in arch support. The upper is made of white canvas. The mukluk is worn over the same sock combination (see Figure 6) as the felt boot, with an added felt sock for additional insulation. It is a definite improvement over the original mukluk that was tested, but is still

Figure 9. Arctic Mukluk with Wool and Felt Socks.

unsatisfactory for several reasons. Consequently, its development is continuing.

Here then is the soldier of the Arctic, completely dressed to withstand the most extreme weather to be found anywhere. He is dressed in the most modern, efficient clothing that the Army can offer at this time. But development continues—does not stand still.

How much does all this weigh?

Twenty-eight pounds complete—*warmth and mobility.*

Technique of Instruction: Personality and the Lecture*

Compiled by Captain Marvin J. Berenzweig, Infantry

After his lecture on Military Justice, Lieutenant Green strode angrily into the orderly room and stamped up to the first sergeant's desk. "Sergeant, I want you to find some extra work for Phillips, Brown, and Williams," he demanded loudly.

"What did they do?" the first sergeant asked, then added, "It's not like those men to foul up."

"Weren't paying attention in class," Green said shortly "And I think Brown was actually sleeping."

"Lieutenant Green," a familiar voice said, "come in here, please, and close the door."

"Yes, sir!" Green hadn't realized the company commander was around, or he might have sounded off a little less loudly.

"Sit down, Green," Captain Ames said quietly. "Now what's the trouble?"

"Well, the men weren't paying attention in class," Green spoke up. "And there wasn't any reason for it. I prepared that lesson thoroughly."

"I know you did," Captain Ames agreed in his quiet voice. Green was a good officer, thorough and conscientious. A little hot-tempered, perhaps, but sound. A good instructor too, except when he had to do a lot of talking, like that lecture on Military Justice.

"So they weren't paying attention, is that it?" Captain Ames continued. "And you feel they ought to get some extra fatigue, is that right?"

"Yes, that's right," Green replied, but he sensed that his position was not exactly sound, that Captain Ames did not

*Second of a series of short articles on the Technique of Instruction.

agree with him, and that maybe in some way he was at fault. He said, "The men ought to pay attention in class when the instructor has given a lot of thought and work to the lesson." But he realized that this sounded lame, like a complaint.

"Let's see, now," Captain Ames said. "That was a fifty minute lecture, wasn't it? A mighty long time to hold the interest of anyone when you're doing all the talking, even with those fine training aids you had."

"You mean I bored them?" Green put in quickly. He was suddenly aware that that was what had happened. He had bored the class. He wasn't much at this lecture business. He preferred to teach by the "telling-showing-doing" method. But subjects like Military Justice didn't fit into this method too well. You had to do a lot of talking, and he wasn't much of a talker. Yes, that was what had happened —he had bored the men and he wanted to punish some of them for looking bored. He was dead wrong. Soldiers were not different from anyone else. Why, he got damned tired himself when old Major Dokes started one of his interminable lectures at Officers' School.

"I guess it's my fault," Green admitted. "I'm in the wrong."

"Well," Captain Ames said, "it would be sort of a travesty on the subject of Military Justice to punish those men for something that was basically your fault. That lecture of yours was pretty dull stuff. I caught the tail end of it myself. Even old Sergeant Rourke, the best platoon sergeant in the company, was having difficulty keeping awake."

"But why was the stuff dull?" Green was honestly confused. "I spent twelve hours preparing that lesson—I knew it backwards. I could have given it in my sleep."

"Knowledge and preparation," Captain Ames said, "are not enough when you are giving a lecture. You have got to throw some personality into it. Oh yes, you knew the subject from A to Z, but with that monotone you were using the men got tired when you got to B; they quit listening. Now I happen to know you are a conscientious officer, but you

didn't show it. You stood there like a wooden Indian and the words you used were just as wooden. No life, no vitality, no enthusiasm. Your attitude was contagious and it infected the class—particularly Phillips, Brown, and Williams. You see, you never varied the pitch of your voice—you sounded like a talking machine, a robot. You sounded disinterested. I know you weren't, but that's the way you sounded. And then you got mad when you saw Brown dozing, and the class knew you were mad. You flew off the handle, lost control. That's not good."

"No, it's not," Green admitted. "What else did I do wrong?"

"I think you took the subject too seriously, Green. A sense of humor is a wonderful thing, but there wasn't a spark of it in your lecture. And you were wordy as all get out. Kept repeating the same words over and over again, as if you were in love with them."

"I must have sounded like Maj——, that is, I must have sounded pretty bad," Green corrected himself. The twinkle in Captain Ames' eye was almost instantly gone, but Green saw that he was not entirely in the dog house.

"Another thing, Green," Captain Ames continued. "You didn't show sincerity. I happen to know you are a sincere officer, but you did not let the men see it. You were impatient with their questions, and you could have used more courtesy with the answers you did give. As a result, they clammed up and let you drone on. They were not interested because everything you told them was said in an uninteresting way, lifeless, dull, and negative."

"I never was slick with words," Green defended himself.

"You don't have to be a polished speaker to instruct men," Captain Ames said. "One of the best instructors I ever knew was a Polish-American sergeant with a sixth grade education and an accent. He was successful because he was full of enthusiasm for his subject, and he was humorous too, without being just a wise-cracker. He threw every ounce of his personality into it. His grammar was pretty weird sometimes, but he got his point across."

"I'm beginning to see the light," Green said. "My next lecture may not be a masterpiece, but I think it will show improvement."

"There is one thing I want to warn you about," Captain Ames said. "Don't try to copy any one else's personality or mannerisms. What works for them, may not work for you. Use your own personality." Captain Ames got up from his desk, and Green, taking the cue, rose also.

At the door to Captain Ames' office, Green turned and said, "Well, I'm not going to copy anybody's personality, but I'm going to listen pretty close at Officers' School tonight when Maj——, that is, when....."

"I know," Captain Ames said. "To see what *not* to copy."

Marginal Data on Maps

Compiled by Major Donald D. Dunlop, Infantry

Look at a map. That information on the margins is put there for you to use. To use it right you need to know what it is there for. To get an idea of how it will help you, try to think of a map without marginal data. There would be no convenient way to convert map distance into ground distance. There would be nothing to show the difference between true, magnetic, and grid north; thus you would not be able to convert a grid azimuth (map direction) to a magnetic azimuth (ground direction), and vice versa. The map would be almost worthless to you—and these items are only a part of the information given by marginal data.

This makes it clear that you need a working knowledge of marginal data to be a good map reader. And what infantryman doesn't need to be a good map reader?

The illustrations in this article contain the same type of marginal information that is found on most American military maps. The order in which this information is given —that is, the placement and sequence—is almost always the same on these maps. If you occasionally find slight differences, don't let it bother you. When you know the standard marginal data, you can easily understand slight variations.

Figure 1, below, is the Map Identification. It has three items of information—the sheet number and the Army Map Service series of which the map is a part; the name of the Map; and the general locality and scale. This data is usually found along the top margin of the map as shown in the illustration.

Figure 1. Map Identification.

Now look at Figure 2. This data is normally found in the lower left margin. It tells you how, when, and by

whom the map was prepared. This is general information, but it does give you an idea of what a complicated process map making is.

PREPARED UNDER THE DIRECTION OF THE CHIEF OF ENGINEERS BY THE ARMY MAP SERVICE (AM), CORPS OF ENGINEERS, DEPARTMENT OF THE ARMY, WASHINGTON, D.C. COMPILED IN 1947 BY STEREOPHOTOGRAMMETRIC (MULTIPLEX) METHODS AND FROM USC&GS HYDROGRAPHIC CHART NO. 5403, 1947 AERIAL PHOTOGRAPHY 1945. HORIZONTAL AND VERTICAL CONTROL BY USGS AND USC&GS. PUBLIC LAND SURVEY LINES ARE BASED ON THE MT. DIABLO PRINCIPAL MERIDIAN. THIS MAP COMPLIES WITH THE NATIONAL STANDARD MAP ACCURACY REQUIREMENTS. MAP FIELD CHECKED.

Figure 2. How, When, Who.

Figure 3, is the legend. It is usually placed in the left portion of the bottom margin. You are probably quite familiar with this part of marginal data. The present practice of the Army Map Service is to have a fairly detailed legend, much more informative than has been true in the past. Most of the conventional signs that appear on the map are put in the legend. This makes it a convenient reference when using the map. On foreign maps the legend has the conventional signs of the country it represents (See Figure 4). In this figure you can see that many terrain features are shown by conventional signs quite different from our own. Yet you can easily translate these unfamiliar signs into the correct terrain features by using the legend. On many "Americanized" maps the marginal data goes one step further in translation aids by having a glossary (see Figure 5) which lists the native names for terrain features along with the English name for each.

Figure 6, is usually centered on the bottom margin of military maps. It shows the scale, method of indicating relief, projection, and grid system. The scale is shown as a representative fraction, which means in this case that one unit of measure on the map equals 25,000 similar units of measure on the ground. As you can see, the scale is also shown graphically by three graphic scales graduated in miles, meters, and yards. Each of these scales has a primary scale to the right of the O, and an extension for very precise measuring to the left of the O. You can use these graphic scales as a special ground distance ruler, and very convenient they are.

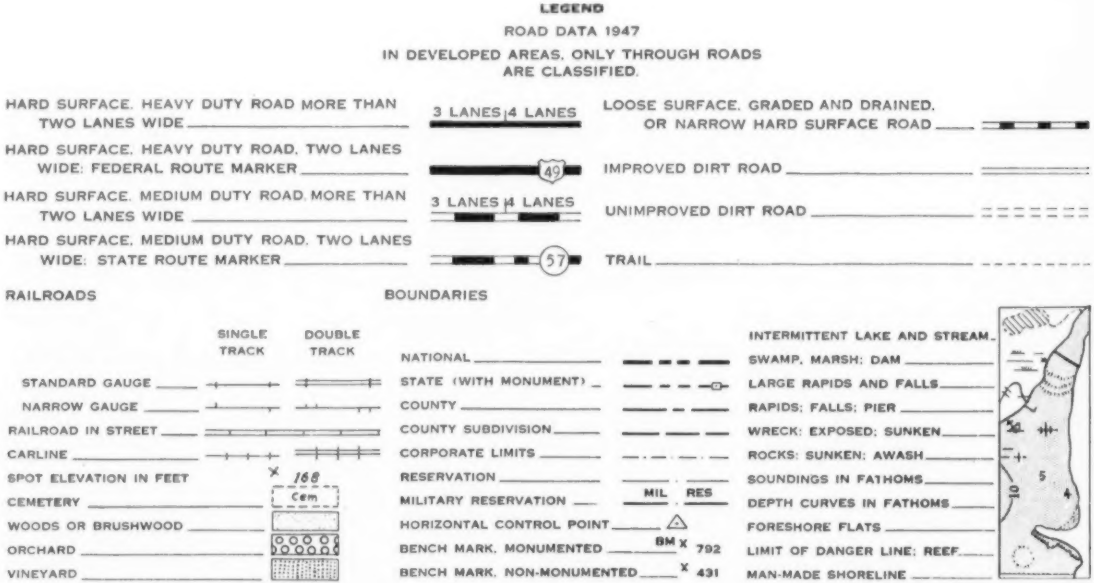


Figure 3. Legend.

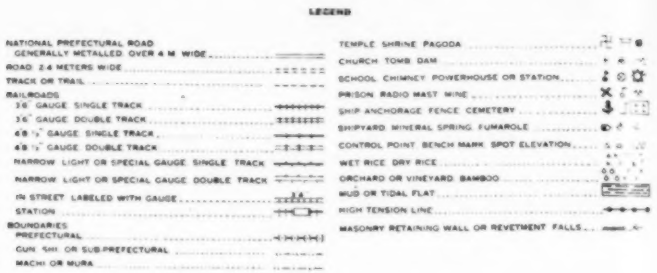

LEGEND
NATIONAL PREFECTURAL ROAD GENERALLY METALLED OVER 4 M. WIDE
ROAD 2.4 METERS WIDE
TRACK OR TRAIL
RAILROADS
3'6" GAUGE SINGLE TRACK
3'6" GAUGE DOUBLE TRACK
4'8½" GAUGE SINGLE TRACK
4'8½" GAUGE DOUBLE TRACK
NARROW LIGHT OR SPECIAL GAUGE SINGLE TRACK
NARROW LIGHT OR SPECIAL GAUGE DOUBLE TRACK
IN STREET LABELED WITH GAUGE
STATION
BOUNDARIES PREFECTURAL
GUN SHI OR SUB-PREFECTURAL
MACHI OR MURA
TEMPLE SHRINE PAGODA
CHURCH TOMB DAM
SCHOOL CHIMNEY POWERHOUSE OR STATION
PRISON RADIO MAST MINE
SHIP ANCHORAGE FENCE CEMETERY
SHIPYARD MINERAL SPRING FUMAROLE
CONTROL POINT BENCH MARK SPOT ELEVATION
WET RICE DRY RICE
ORCHARD OR VINEYARD BAMBOO
MUD OR TIDAL FLAT
HIGH TENSION LINE
MASONRY RETAINING WALL OR REVETMENT FALLS

Figure 4. Legend on a Foreign Map.

GLOSSARY

ACQUEDOTTO ACQUED - - AQUEDUCT	MONTAGNA, MGNA — — — MOUNTAIN
ALVEO — — — — — — — RIVER-BED	MONTE, M — — — — — — MOUNTAIN, MOUNT
BAIA, B — — — — — — BAY	OSPEDALE — — — — — — HOSPITAL
BOSCO, B — — — — — — WOODS	PADULE, PAD — — — — — SWAMP, MARSH
BOCCA, BCA — — — — — MOUTH OF RIVER	PIANA, PNA — — — — — PLAIN
BARGO BO, BGO — — — BOROUGH, SUBURB	PIAZZA — — — — — — — PUBLIC SQUARE
CALA — — — — — — — BAY, COVE, INLET	POGGIO, PGIO — — — — MOUND, HILL
CAMPO — — — — — — FIELD	PONTE, PTE — — — — — BRIDGE
CANALE, C, CAN — — — CANAL, CHANNEL	PORTO, PTO — — — — — PORT
CAPO, C — — — — — — CAPE	POSTA — — — — — — — POST OFFICE
CASALE, C — — — — — HAMLET	POZZO, PZO — — — — — WELL
CASE, CSE — — — — — HOUSES	PUNTA, PTA — — — — — POINT, PEAK
CASERMA — — — — — — BARRACKS	RIO, R — — — — — — RIVER
CIMA, CMA — — — — — SUMMIT, PEAK	ROCCA, RCA — — — — — ROCK
COLLE, CLE — — — — — HILLS	RUDERI — — — — — — RUINS
CORNO, CNO — — — — MT., PEAK	SALINE — — — — — — SALT MARSH
FIUME, F — — — — — — RIVER	SCOGLIO (I), SCL, SC — ROCK(S)
FOCE, F — — — — — — RIVER MOUTH	SELVA — — — — — — — WOODS
FONTANE, FONTNE — — — FOUNTAIN	SERRA, SRA — — — — — GLEN, RAVINE
FORNACE — — — — — — KILN	SORGENTE — — — — — SPRING
FOSSO, FSO, F — — — DITCH	SPIAGGIA — — — — — SHORE, BEACH
GOLFE, G — — — — — GULF	STAGNO, SGNO — — — MARSH, POND, LAGOON
GROTTO — — — — — GROTTO	STAZIONE, STA, ST — — STATION
ISOLA, (E), I, (IE) — — ISLAND(S)	STRADA — — — — — — STREET, ROAD
LAGO, L — — — — — — LAKE	STRETTO, STR — — — STRAIT
LAGUNA — — — — — — LAGOON	TORRENTE, T — — — — STREAM
LAMA — — — — — — — FLOODED DISTRICT	TORRE, TRE — — — — TOWER
MACCHIA — — — — — THICKET, SHRUB	VIALE — — — — — — AVENUE
MARE — — — — — — — SEA	VIA — — — — — — — COURSE, WAY, ROAD
MARINA — — — — — — SEA-COAST	VIGNA — — — — — — VINEYARD
MOLO — — — — — — — BREAKWATER, PIER	

Figure 5. Glossary.

The next item is the contour interval. As you know, contour lines are imaginary lines on the ground which connect points of equal elevation. On a map they are shown by brown lines indicating vertical distance. In this case we see that vertical distance begins at mean sea level, and that the contour interval is 20 feet with auxiliary contours at 10 foot intervals. American military maps always use feet for stating contour interval, but many foreign maps use meters.

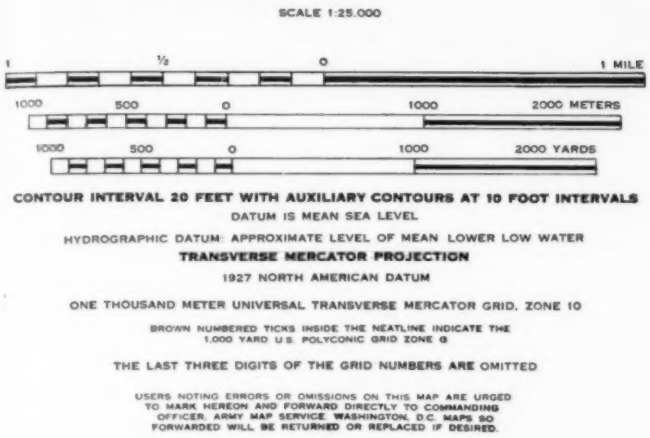

SCALE 1:25,000
1
½
0
1 MILE
1000
500
0
1000
2000 METERS
1000
500
0
1000
2000 YARDS
CONTOUR INTERVAL 20 FEET WITH AUXILIARY CONTOURS AT 10 FOOT INTERVALS
DATUM IS MEAN SEA LEVEL
HYDROGRAPHIC DATUM: APPROXIMATE LEVEL OF MEAN LOWER LOW WATER
TRANSVERSE MERCATOR PROJECTION
1927 NORTH AMERICAN DATUM
ONE THOUSAND METER UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 10
BROWN NUMBERED TICKS INSIDE THE NEATLINE INDICATE THE 1,000 YARD U.S. POLYCONIC GRID ZONE G
THE LAST THREE DIGITS OF THE GRID NUMBERS ARE OMITTED
USERS NOTING ERRORS OR OMISSIONS ON THIS MAP ARE URGED TO MARK HEREON AND FORWARD DIRECTLY TO COMMANDING OFFICER, ARMY MAP SERVICE, WASHINGTON, D.C. MAPS SO FORWARDED WILL BE RETURNED OR REPLACED IF DESIRED.

Figure 6. Scale, Relief, Projection, and Grid System.

The remaining information in Figure 6 is about the projection and grid system. This is a very technical matter and fortunately for us all we don't have to know much about it to read maps well, although the *map maker* is very much concerned with it. Before August 1948, the common projection and grid system on domestic military maps was the polyconic projection (See Figure 7) and the U. S. Polyconic Grid, sometimes called the U. S. Domestic Grid. This has been changed in favor of what is called the "universal transverse mercator grid." Department of the Army Circular 235, 6 August 1948, which authorizes and establishes the change, goes into a great deal of technical detail about it. For the next couple of years you may see some maps with both grid systems on them, in which case the transverse mercator grid will be shown in full lines and the polyconic grid by marginal ticks. Briefly put, a map projection is a representation of the earth's surface upon a plane, and you can regard a grid as a set of perfect squares, scale 1:1, on that plane, and then transferred to the earth's surface. In the transfer process the polyconic projection distorts these squares considerably, while the transverse mercator projection reduces this distortion.

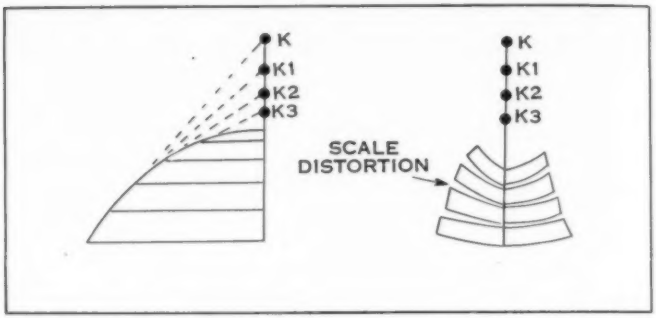


Figure 7. Polyconic Projection.

Figure 8 shows the declination diagram, which normally appears in the lower right corner of the bottom margin. This diagram gives the relationship of magnetic, true, and grid norths. The diagram usually has three prongs representing the three norths. The magnetic prong is surmounted with a half-arrow and is usually labeled "Magnetic North." True north is surmounted by a five pointed star and labeled "True north," and the prong for grid north is surmounted with the letters "GN" and is not otherwise identified.

When there is no difference between any two of the norths, a single prong represents the coinciding norths and is so indicated. The angles between the different prongs as they are shown on the sheet are not generally accurate. They are approximations, and this is shown by the note under the diagram in Figure 8—"Use diagram only to obtain numerical values." Opposite each arc you see a note giving the value of the declination angles. These values are given in degrees and minutes with equivalents in mils. Printed below the declination diagram is an annual magnetic change note which states the year on which the magnetic data in the diagram is based, and a statement that the declination is given for the center of the sheet. The amount of annual magnetic change is given to the near-

est minute, together with the geographic direction of the change.

In Figure 8 also the last five lines refer to what is commonly called the protractor scale. This scale appears on each map sheet to aid you in determining the accurate mag-

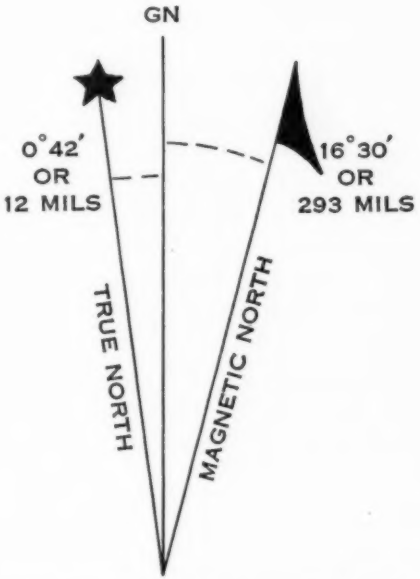

GN
0°42′
OR
12 MILS
16°30′
OR
293 MILS
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION 1948
FOR CENTER OF SHEET
ANNUAL MAGNETIC CHANGE 2′ WESTERLY
USE DIAGRAM ONLY TO OBTAIN NUMERICAL VALUES. TO DETERMINE MAGNETIC NORTH LINE, CONNECT THE PIVOT POINT "P" ON THE SOUTH EDGE OF THE MAP WITH THE VALUE OF THE ANGLE BETWEEN GRID NORTH AND MAGNETIC NORTH, AS PLOTTED ON THE DEGREE SCALE AT THE NORTH EDGE OF THE MAP

Figure 8. Declination Diagram.

netic north line on the sheet. It consists of a pivot point, labeled P (See Figure 9, below), which appears on the south edge of the map, and a degree scale (See Figure 10), which appears at the north edge of the map. The scale is calibrated into 15-minute divisions and extends a minimum of 2° (to the nearest full degree) on each side of the value given for the angle between magnetic and true norths.

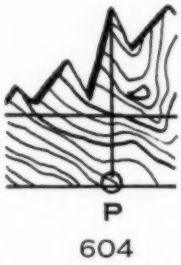


Figure 9. Pivot Point.

Long scales are broken to show only a portion of the total scale, but this portion always brackets the value of the angle between grid and magnetic norths. For example, if a magnetic north line were drawn on a map which had Figures 8, 9, and 10 as items of marginal data, you would determine the G-M angle from the declination diagram (16½°E), and then draw a line connecting the pivot point on the bottom edge of the map to the 16½°E shown on the scale at the north edge of the sheet.

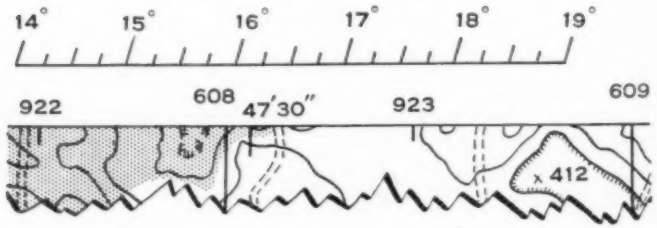


Figure 10. Degree Scale.

Maps of foreign countries often have a declination diagram similar to the one shown in Figure 11, below. Here you can see that magnetic declination is given for the center of the sheet, and that grid declinations are given for the centers of the west and east edges of the map. If you wished to determine the G-M angle of the map which contained this diagram, the grid declination for 1944 of the center of the sheet would be 4° 36′ W, the magnetic declination 9° 05′ W, and the G-M angle for 1944 would be 4° 29′ W. By consideration of the annual magnetic change given, the G-M angle for January 1950 would be 3° 23′ W.

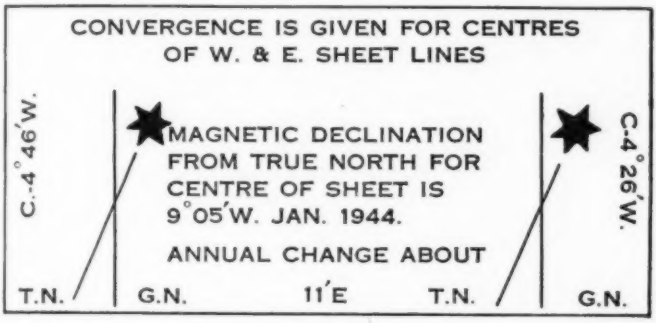


Figure 11. Declination Diagram on a Foreign Map.

In Figure 12 you see an index to adjoining sheets. This index furnishes the names and sheet numbers of adjoining sheets. We also see an index to boundaries, which in this case shows that all of the area represented on the map, except the upper left corner (which is water) falls within Monterey County. However, if more than one county or state or other subdivision should appear, the index would show it. On the map itself, the actual boundary lines are shown, each line being identified in the legend. In Figure 3, for example, you see the conventional signs for seven different types of boundaries.

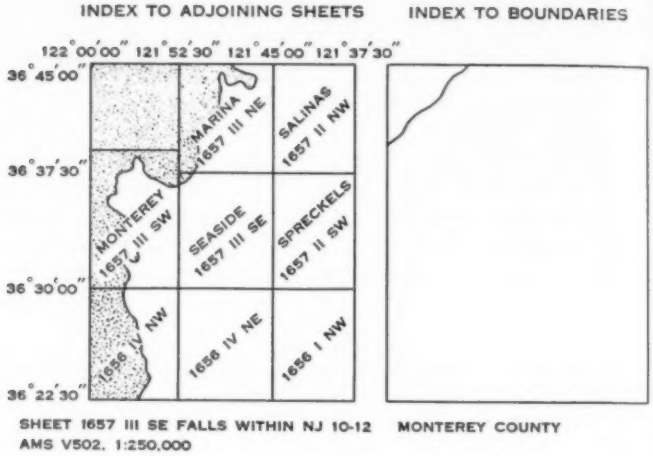


Figure 12. Adjoining Sheets and Boundaries.

The information found in Figure 13, below, is usually found in the lower right corner of a map. In part, it duplicates the information shown in Figure 1. It shows the name of the map, the state, the county, the geographic coordinates of the lower right corner of the sheet, and the size of the map in minutes. In this particular illustration, you see that the geographic coordinates of the lower right corner are 36° 30′ 00″ N, 121° 45′ 00″ W. The size of the map is 7.5 minutes (7′ 30″) both horizontally and vertically. Should the two dimensions differ, a statement such as 7.5×8.4 would appear.

SEASIDE, CALIFORNIA
MONTEREY, COUNTY
N3630-W12145/7.5

Figure 13. Further Identification, Geographic Coordinates, and Size.

On all four edges of the map—that is, the map border—you normally find several helpful items of information. (See Figure 14). These are the grid line numbers of the principal grid (the universal transverse mercator that we so briefly discussed in a foregoing paragraph); the grid line numbers of a secondary grid (the U.S. polyconic) opposite the marginal ticks; the names and distances to the principal nearby towns, stated in miles and tenths of miles, in this case San Francisquito, 5.5 miles; and the geographic coordinate neatlines along with their respective values. Figure 14 shows how this information appears on a typical map.

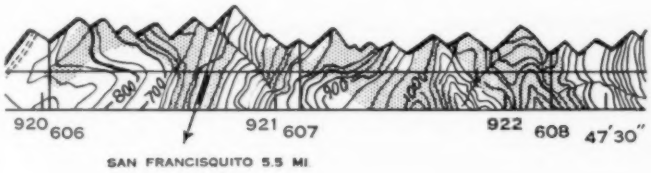


Figure 14. The Map Border.

In conclusion, you might compare marginal data with the title and index of a book, for both serve the same purpose. It is a very helpful source of information. Knowing what to look for and how to use it is a "must" for anyone who wants to be more than merely passable as a map reader. And what infantryman doesn't?

Rate on the March*

One sure way to exhaust your men on a foot march is to ignore the factors which affect the *rate* of march.

Rate is not speed, which is velocity at any given instant. Rate is average speed of a column over a period of time that includes short halts. When figuring the rate for a march, consider road conditions, terrain, the state of training and physical condition of your men, the size of your outfit, and the load being carried by each man.

And then, having decided the rate, consider your *pace* setter. He is the key to your rate problem, a selected man who marches about five yards ahead of the column and keeps your specified rate by marching at the cadence required by his length of step. He has a watch with a second hand, he knows by practice his pace (length of step), and he uses his watch to keep the required cadence (steps per minute). Think of him as your "control," such as the gas pedal of your car. Tell him to slow it up or speed it up, and the column reacts automatically. Keep a critical eye on him. It will be easier on your men if they don't keep in step with the pace setter—provided they keep the same rate.

The pace or length of step is 30 inches for cadences between 106 and 120 steps per minute. For double time the pace is 36 inches and the cadence is 180 steps per minute. The pace of the average man is 30 inches when marching at a speed of three miles per hour on level ground. The 30-inch step is easy for soldiers of varied heights; training and practice will accustom tall and short alike to this pace without hardship. The cadence, which determines the speed of the unit, varies according to the ground you are march-

*This is the second of a series of short articles on the Technique of Marching. The first, MORALE ON THE MARCH, appeared in the October Issue.

NOMOGRAPH 4
RATE, STEP, CADENCE

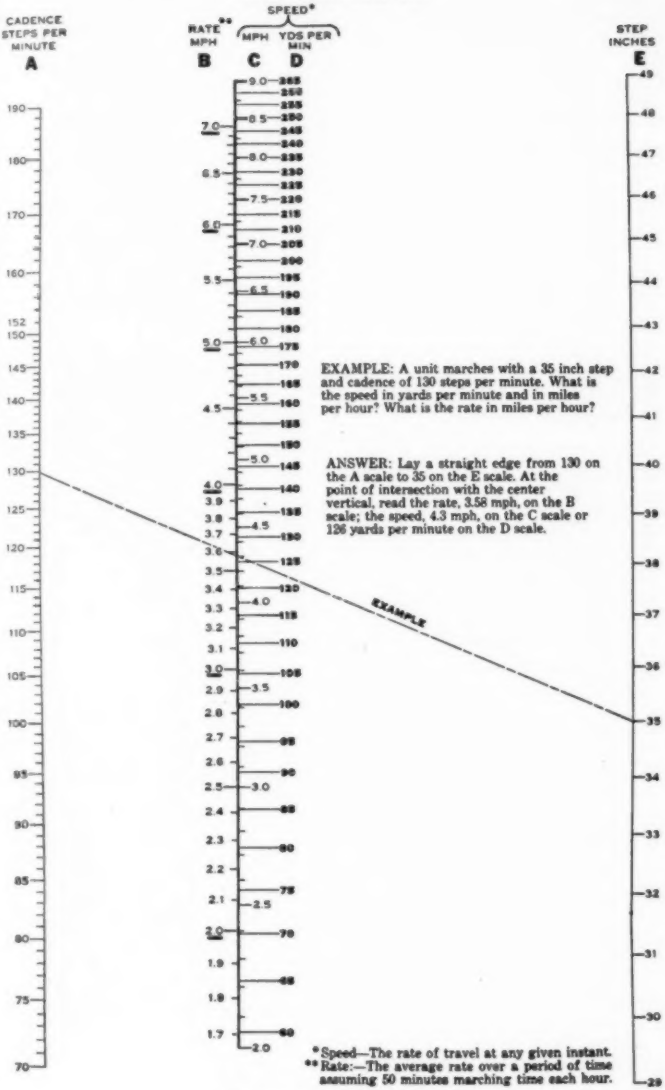

CADENCE STEPS PER MINUTE
A
RATE** MPH
B
SPEED*
MPH
YDS PER MIN
C
D
STEP INCHES
E
EXAMPLE: A unit marches with a 35 inch step and cadence of 130 steps per minute. What is the speed in yards per minute and in miles per hour? What is the rate in miles per hour?
ANSWER: Lay a straight edge from 130 on the A scale to 35 on the E scale. At the point of intersection with the center vertical, read the rate, 3.58 mph, on the B scale; the speed, 4.3 mph, on the C scale or 126 yards per minute on the D scale.
EXAMPLE
*Speed—The rate of travel at any given instant.
**Rate:—The average rate over a period of time assuming 50 minutes marching time each hour.

Figure 1. Nomograph.

ing over. On surfaced roads or on firm, level ground, march at 106 steps per minute, or 2½ miles an hour, which is the normal rate. However, you can vary the cadence from 106 to 120 steps per minute without seriously affecting the march formation or the soldiers' march efficiency. Direct your pace setter accordingly. Figure 1 shows a nomograph for figuring the rate, step, and cadence.

When marching uphill, you decrease the cadence and length of step. How much you decrease it is, of course, dictated by the slope of the ground.

For downhill marching, the cadence and length of step is again dictated by the slope of the ground. On moderate, gentle slopes the cadence is the same as for level ground marching; but on steep downhill slopes the cadence is decreased. The entire column must be clear of that terrain requiring a reduced cadence before any increase of cadence can be ordered. A good pace setter remembers this. He doesn't allow himself to slip into a faster cadence just because the head of the column is on easier ground. He never changes the cadence unless ordered to do so.

The normal rates of march are: by day, over relatively flat roads, 2½ miles per hour, and by night 2 miles per hour; across country in daylight, 1½ miles per hour, and by night, 1 mile per hour. Individuals and small separate groups can move at a somewhat faster rate.

You have been reading for two minutes. Nothing new has been expounded here. You knew it all the time. But the next time you set out on a foot march—which will be fairly soon if you're an infantryman—try giving two minutes' thought to your rate. Chances are the march will be smoother and the men fresher, if you apply what you knew all the time.

The New Automatic Rifle Course

Compiled by Captain Frederick H. Black, Jr., Infantry

As with the old rifle marksmanship course,* combat experiences of the past war demanded a realistic revision of the outdated automatic rifle course. The revision has been made: the new course discussed herein approaches the reality of battle. It teaches the automatic rifleman to use all the capabilities of his potent weapon.

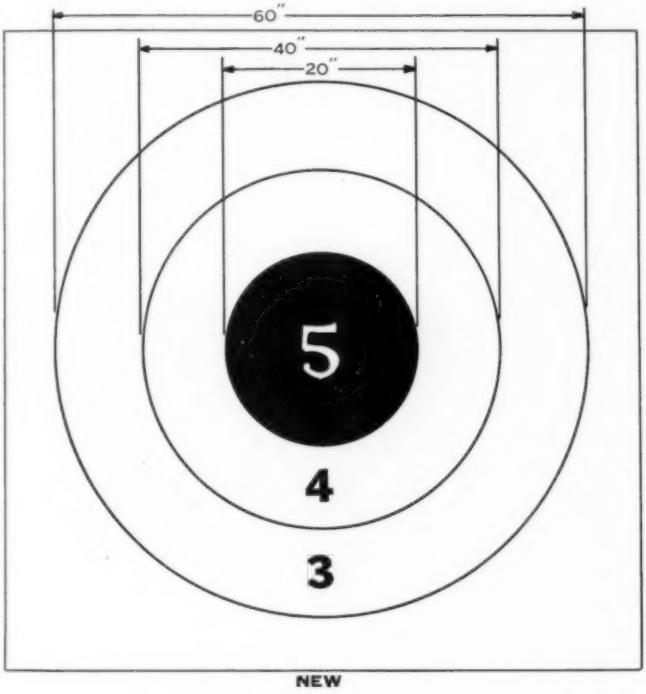


Figure 1.

*An article, THE NEW RIFLE MARSKMANSHIP COURSE, appeared in the October issue of the INFANTRY SCHOOL QUARTERLY.

Briefly stated, the main differences between the old and the new are:

A new rifle B target (see Figure 1) replaces the D target (see Figure 1*a*) of the old course because: (1) throughout preparatory marksmanship we place great emphasis on correct sight alinement and sight picture. The silhouette bull of the D target is inferior in design to the B target for this training. (2) Unwarranted value is given low shots on the D target because the scoring spaces are unequal. Scoring areas of the new B target are equally spaced.

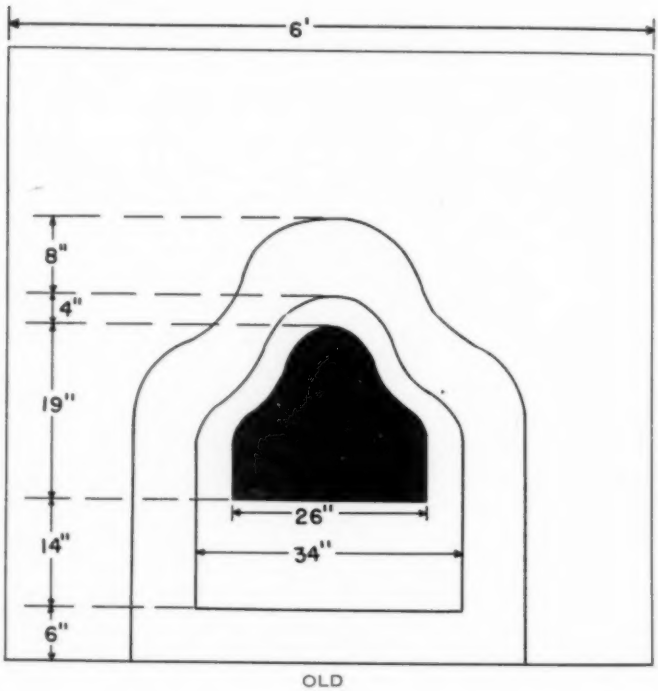


Figure 1*a*.

The 1,000-inch target has been modified (see Figure 2). A round bull 1.8 inches in diameter, with an outer ring 3.6 inches in diameter, replaces the old reduced silhouette target (see Figure 2*a*). Scoring is the same as for the old target.

So much for the target changes.

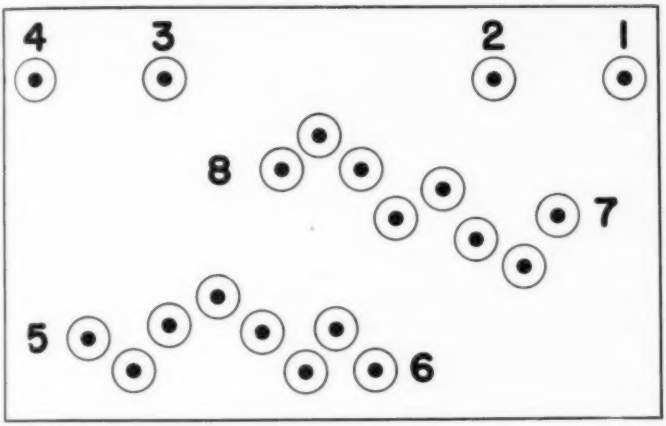


Figure 2 — New Target

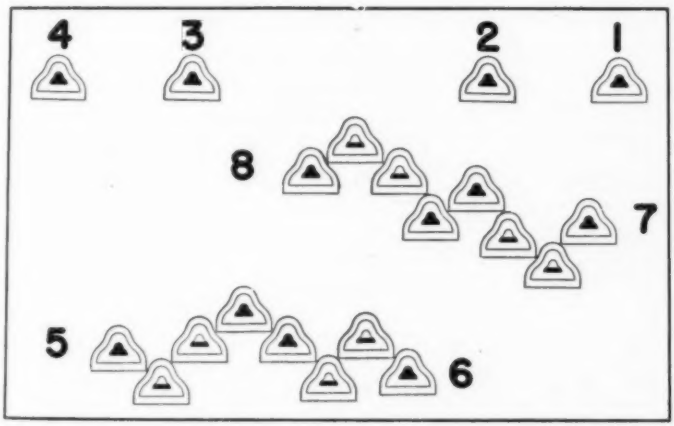


Figure 2*a* — Old Target

The firing positions for Tables I, II, and III (see Figures 3, 4, and 5) remain the same, with one exception. The sitting position is eliminated; rarely employed in battle, it is difficult to use when firing from behind cover.

INSTRUCTION PRACTICE
TABLE I (1000″)

RANGE INCHES	TIME	ROUNDS	TARGET (1000″)	POSITION	REMARKS
1,000	5 min	5	No 1	Prone, bipod rest	Single shot[1].
1,000	2 min, 15 sec	40	No 5 to No 6	Prone, bipod rest	Search and traverse, 8 magazines of 5 rounds each in bursts of 2 or 3.
1,000	1 min, 25 sec	40	No 7 to No 8	Prone, bipod rest	Search and traverse, 2 magazines of 20 rounds each in bursts of 2 or 3.
1,000	20 sec	15	No 4	Prone, bipod rest	One magazine, 15 rounds, 5 round bursts.
1,000	5 min	5	No 3	Kneeling	Loop or hasty sling. Single shot.[1]

Figure 3.

INSTRUCTION PRACTICE
TABLE II

RANGE (YDS)	TIME	ROUNDS	TARGET	POSITION	REMARKS
200	10 min	10	B[2]	Prone, bipod rest	Single shot[1].
200	40 sec	15	B	Prone, bipod rest	3 magazines, 5 rounds each, in bursts of 2 or 3.
300	10 min	10	B	Prone, bipod rest	Single shot[1].
300	40 sec	15	B	Prone, bipod rest	3 magazines, 5 rounds each, in bursts of 2 or 3.
500	10 min	10	B	Prone, bipod rest	Single shot[1].
500	25 sec	10	B	Prone, bipod rest	1 magazine, 10 rounds, in bursts of 2 or 3.

Figure 4.

RECORD PRACTICE
TABLE III

RANGE (YDS)	TIME	ROUNDS	TARGET	POSITION	REMARKS
200	5 min	5	B[2]	Prone, bipod rest	Single shot[1].
200	40 sec	15	B	Prone, bipod rest	3 magazines, 5 rounds each, in bursts of 2 or 3.
300	40 sec	15	B	Prone, bipod rest	3 magazines, 5 rounds each, in bursts of 2 or 3.
500	5 min	5	B	Prone, bipod rest	Single shot[1].
500	25 sec	10	B	Prone, bipod rest	1 magazine, 10 rounds in bursts of 2 or 3.

1. These rounds will be fired single shot from magazine containing number of rounds specified.
2. The new B target.

Figure 5.

In place of two fixed firing tables given in FM 23-15, the new course substitutes: (1)—Table IV, (Figure 6) a transition course including firing from battlefield positions at field targets, (2)—Table V, (Figure 7) from the assault fire position—hip firing—at surprise targets. This latter Table combines a reaction course with close combat firing. All firing in the course is done with ball ammunition at the slow cyclic rate.

TRANSITION FIRING
TABLE IV

LANE NO.	RANGE (YDS)	TIME (SEC)	TOTAL ROUNDS	TARGETS	REMARKS
1	150 400	7 seconds per silhouette.	20	4 type E silhouettes.	1 magazine, 20 rounds, in bursts of 2 or 3.
2	200 to 300 & 400	20 seconds per target.	40	2 targets, each group consisting of 3 MG panels as individual targets.	2 magazines, 20 rounds each, in bursts of 2 or 3.
3	200 400 & 500	8 seconds each moving target; 10 seconds for B target.	20	2 moving targets (E silhouettes) and 1 B target.	1 magazine, 20 rounds, in bursts of 2 or 3.

Figure 6.

ASSAULT FIRING

TABLE V

PHASE NO.	RANGE (YDS)	TIME (SEC)	TOTAL ROUNDS	TARGETS	POSITION
1	30-60*	1-3 sec	20	1-2E	Hip
		2-3 sec		2-2E	Hip
		3-3 sec		3-2E	Hip
		4-3 sec		4-2E	Hip
2	30-70	5-4 sec	20**	5-3E	Hip
		6-4 sec		6-3E	Hip
		7-4 sec		7-3E	Hip
3	40-340	8 } 6 sec***	20**	8-3E	Hip
		9 }		9-3E	Hip
		10-20 sec		10-3E	Prone

* The firer starts from the prone position with three full magazines in his belt. On signal from person in control of the lane, the firer rises, adjusts the sling for the assault (hip) firing position, loads one magazine, and moves down the lane on the "alert."

** Firer is instructed to fire 20 rounds in each phase. Therefore in the second and third phases the additional two shots may be fired where required.

***The firer is allowed six seconds for the two sets of targets, both sets appearing simultaneously.

Figure 7.

Now you know the main differences between the old and new courses. For a brief orientation on the actual firing let us follow automatic rifleman, *Private John Bar.* He will fire Tables I through V.

Bar's first step is firing on the 1,000 inch range (refer to Table I, Figure 3). He initially sets his rear sight at 200 yards, and he shoots at the modified target, Figure 2. Firing is progressive; before he advances to Table II, he must make a minimum score of 100 on Table I. This table is not fired for record.

Successfully finishing Table I, *Bar* now goes to the known distance range for practice. (Refer to Figure 4.) Practice consists of firing Table II at least once; it may be fired several times. Ammunition and time are the only limiting factors. This Table is not fired for record.

Completing his practice firing, *Bar* fires Table III (see Figure 5) once—no more is allowed for record—and proceeds to Table IV (see Figure 6) for transition work.

Figure 8 shows the field target range used for Table IV. With slight modifications it may be superimposed on the range used for Table VIII, the new M1 course (see THE NEW RIFLE MARKMANSHIP COURSE, October issue). Control point numbers shown on this figure refer to the respective BAR lanes.

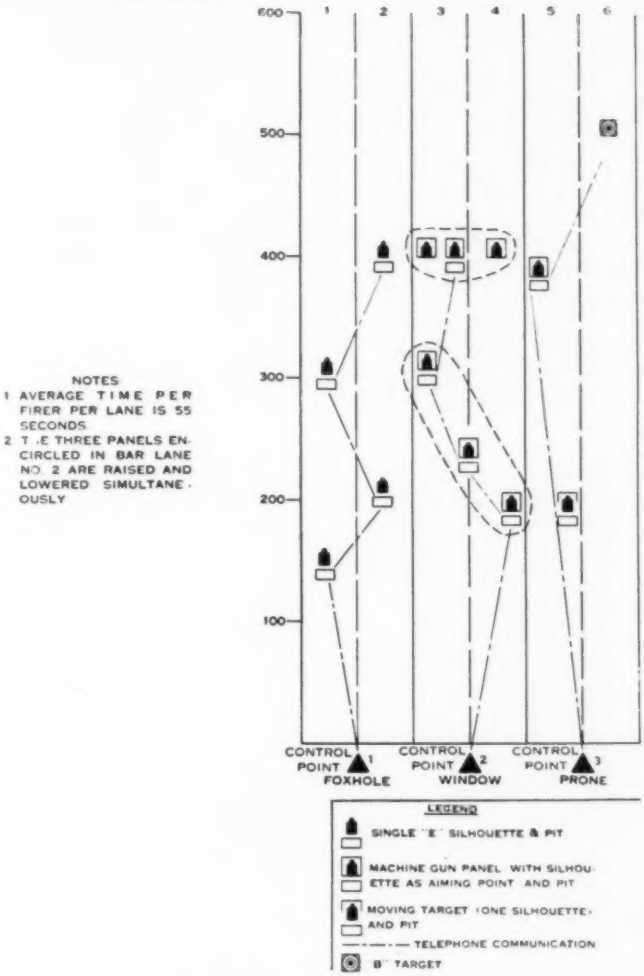


Figure 8. Range Layout for Table IV.

Private Bar finds realism in Table IV. He fires from combat-like positions as shown in Figures 9, 10, and 11. Table IV may be fired several times for instruction practice, but only once for record.

Figure 9. Foxhole position.

Figure 10. Open window position.

In lane 1 from the foxhole position, (see Figure 9) *Bar* fires at four E-type silhouettes. (See Figure 8.) Ranges vary from 150 to 400 yards. He uses the battle sight.

In lane 2 *Bar* fires first at a diagonal group of three targets at ranges from 200 to 300 yards. He next fires at a lateral group of three targets at 400 yards. Each target in the two three-target groups is a machine-gun panel with one E-type silhouette centered in the group as an aiming point. Each of the two target groups is so devised that it may be raised and lowered simultaneously. Using the battle sight, *Bar* fires this lane from an open window (see Figure 10).

Lane 3 finds *Bar* firing from the prone position (see Figure 11). He shoots at two moving E-type targets and one stationary B-type target. One of the E targets is at a range of 200 yards, the other at 400 yards. The B target is at 500 yards. The two E targets traverse 15 feet, moving in opposite directions but parallel to the firer's front. As in firing lanes 1 and 2, *Bar* uses the 300 yard battle sight, with the single exception of the B target, where he estimates the range, and places that setting on his rear sight.*

Figure 11. Prone position.

*The battle sight of the automatic rifle is frequently used in combat. Unlike the new rifle course, however, the new automatic rifle course does not include a hold-off table.

Having completed Table IV, *Bar* is now ready for Table V, assault fire. Figure 12 shows the range diagram. With slight modifications this layout can be superimposed on the range for Table IX, of the new rifle course. As in preceding Tables, this Table may be fired several times for practice but only once for record.

Table V targets are counterbalanced disappearing E silhouettes. They are exposed in sequence by the control officer, who uses a signal which is neither audible nor visible to the firer. Phase lines are used as indicated in Figure 12 to help control firing and to assist in maintaining safety. This Table is fired to teach the engagement of targets at close ranges. The firer uses the hip or assault fire position. (See Figure 13).

Private *Bar* begins this table in the prone position with three fully loaded magazines (20 rounds each) in his BAR belt. Upon signal from the lane control officer he rises, makes the necessary sling adjustment for the assault fire position, loads one magazine of 20 rounds, and moves down the range at the assault-fire position.

He fires at the targets as they are exposed in sequence. He fires five rounds at each of the double sihouettes and six rounds at each of the triple silhouettes, using short bursts of two or three rounds. Before firing at the distant target he takes the prone position, estimates his range, places that estimate on his rear sight, and fires the remaining ammunition from the last magazine. This last action trains *Bar* to take a firing position and cover the reorganization of his outfit after they seize an objective.

This completes the actual firing and gives you a quick familiarization, details excluded, of the new automatic rifle course. Let us discuss those details now. First, safety.

The safety regulations remain generally as listed in FM 23-15 and SR 385-310-1. An officer will be in charge of firing, an officer will be in charge of the pits on known distance ranges, and an officer will be designated as safety officer. However, in the case of Tables IV and V, which are the major changes over the old course, these regulations are amplified as follows: (1) A noncommissioned

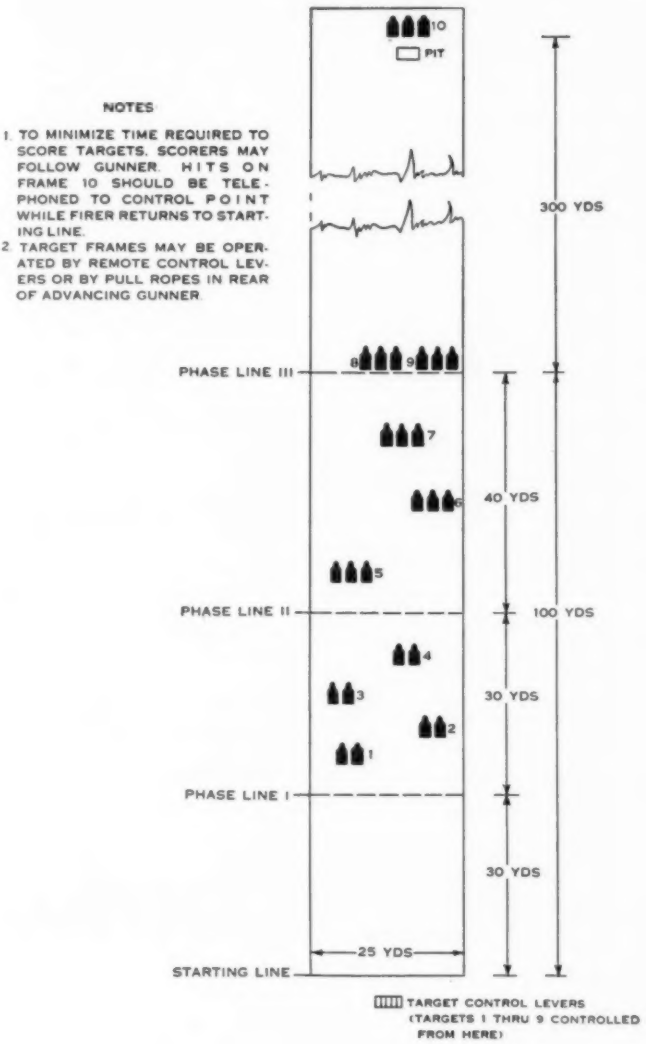


Figure 12. Range layout for Table V.

officer is in charge of each of the three firing lanes, with responsibility for checking that the regulations governing record practice are observed by the gunner and that scores transmitted by the lane telephone operator are properly recorded; and (2) additional officers and enlisted personnel as considered necessary may be detailed as assistants to the officer in charge of firing.

Figure 13. Assault fire position.

Control of the firing line remains the same for Tables I, II, and III. However, the following control procedures are established for Tables IV and V: (1) The battle sight is

used for all firing except Table V and at the B target in Table IV. (2) Having received instructions from the officer in charge, each firer moves forward and performs the preliminary checks on his weapon. Initially, all firers form in rear of lane number 1. After completing this lane, the firer moves to the right upon command of the officer in charge. After the command to commence firing, control of the firing lanes automatically goes to the control point behind each firing position. For Table IV specifically (refer to range layout in Figure 8) this is done as follows:

Lane 1: Upon the command to commence firing, the control point operator signals to any of the four pit operators to display the E silhouette target. This target is displayed for seven seconds and is then lowered. Upon command of the control point operator, another target is raised for the same length of time; this procedure is repeated until all four targets have been displayed. There is no set order for exposing these targets; the operator changes the sequence for each firer. Control point operators give all commands to raise and lower targets on all lanes.

Lane 2: Upon the command to commence firing, the control operator causes either the lateral or diagonal targets to appear. After firing one magazine of 20 rounds, or upon the disappearance of the target, the firer immediately reloads in preparation for the second group of targets. Each of the two groups of targets is exposed for a maximum of 20 seconds or less, depending on the time required by the firer. There is no loss of time between the disappearance of one target group and the appearance of the other target group.

Lane 3: Upon the command to commence firing, the control point operator notifies one of the moving target operators to start the target. (Refer to Figure 8.) This target is exposed for eight seconds, is then lowered, and the second moving target is displayed for eight seconds. The targets are operated so they move in opposite directions, but parallel to the firer's front. When the B target appears, the firer estimates his range, makes the necessary sight adjustment, and fires his remaining ammunition. The B tar-

get is the last one in lane 3. When it disappears, control of all firing lanes returns to the officer in charge. He secures a firing line clearance, and notifies the control point operators. They instruct the target detail to mark targets.

Each target operator, before he moves from his pit to the target, displays a red flag. The target operator marks only those targets under his control. He records the score on a pit score card, marks the bullet holes with a colored pencil, then transmits the score to the control point operator. When the score has been transmitted, and the operators are back in the pits, the target operator lowers the red flag.

The scoring regulations are: (For Table IV.)

Lane 1: The firer gets a bonus of five points for each silhouette that is hit. He gets one point, up to a maximum of five, for each hit on all silhouettes. *Possible score for lane 1 is 40 points.*

Lane 2: The firer gets a bonus of five points for each panel that has been hit. He gets one point for each hit, up to a maximum of six, on all panels. *Possible score for lane 2 is 66 points.* The firer is issued two magazines of twenty rounds each, which gives him four extra rounds to be used as needed.

Lane 3: The firer gets a bonus of five points for each moving target that is hit. He gets one point for each hit, up to a maximum of six, on each of the silhouette targets. He gets a bonus of five points for hitting the B target any place within the three ring, and one point for each hit, to a maximum of six, on the target within the three ring. *Possible score for this lane is 33 points.* The firer is initially issued one magazine of 20 rounds. This gives him two extra rounds to be used if needed.

Ricochets count as hits. Additional points are not given for unexpended rounds.

Table V (refer to Figures 7 and 12) is fired as follows: Instruct each individual to fire 20 rounds in each of the three phases. In phase one, fire five rounds at each of the four sets of targets; in phase two, fire six rounds at each of the three sets of targets. This leaves the firer two extra

rounds to use as desired. In phase three, fire six rounds at each of the three sets of targets. As in phase two, this leaves the firer two rounds to use as needed.

In scoring the targets for Table V, the firer receives a bonus of five points for each target hit. He gets one point for each hit, up to a maximum of five, on targets one through four; and one point for each hit up to a maximum of six, on targets five through ten. The possible score for this course is 106 points.

The following minimum aggregate scores represent the three qualification categories:

Expert Automatic Rifleman.....350
Automatic Rifle Sharpshooter.....310
Automatic Rifle Marksman.....270

These qualifications are obtained by computing the firer's aggregate score from Tables III, IV, and V, record firing. Should the size of available ranges prohibit 500 yard firing, necessary changes may be made in the qualification scoring. The following minimum aggregate scores are prescribed when firing at 500 yards is eliminated:

Expert Automatic Rifleman.....330
Automatic Rifle Sharpshooter.....290
Automatic Rifle Marksman.....255

There you have it—the new versus the old. You are now ready for the next step up the ladder—Teamwork.

Aggressor Army

Compiled By Major G. C. Warren, Jr., Infantry

One evening in November 1946, as the people of America were listening to their radios, the following broadcast unexpectedly came booming out of the loudspeakers. . . .

> "Flash . . . Aggressor armies have landed at several points on the California coast. Guided missile attacks on Chicago, Kansas City, Detroit, New York, Washington, Seattle, San Francisco, and Los Angeles have destroyed many of our industrial plants. Communications are disrupted. Loss of life is enormous. This reporter has learned from a reliable Washington source that the few combat divisions which we can put in the field immediately are speeding by train and motor convoy to the west. One airborne division is on the move. The enemy is advancing rapidly to the east. . . . "

This fictitious news broadcast is based on the history of Aggressor as contained in FM 30-102, *Handbook on Aggressor Military Forces,* and shows the extent to which the army has gone to develop this maneuver enemy. Figure 1 is a map of the imaginary Aggressor Nation, which includes portions of Southern Europe and North Africa. You can see it is called a republic; however, we know that it is a dictatorship modeled after the governments of Hitler and Mussolini.

For background, a synopsis of the history of Aggressor is appropriate:

Chaotic conditions reigned in western Europe at the close of World War II. At that time a group of men who still believed in the totalitarian form of government assembled

Figure 1. Map of the Aggressor Nation.

in Madrid, Spain, for the purpose of forming such a government. Using shrewd propaganda, enemy agents, and underground organizations, these men were able to organize quickly and in a surprisingly short time took over the weakening Spanish government and established the so-called Aggressor Republic. At that time Aggressor included Spain and Spanish Morocco. During this same period, the Aggressor leaders were sending their agents into neighboring countries and flooding these countries with skilfully prepared propaganda. The result was that Southern France, Northern Italy, Bavaria, and the Tyrol seceded from their countries and joined the Aggressor Nation which is now composed of the area shown on the map. (Refer to Figure 1.)

The Aggressor invasion of California, referred to in the news broadcast, ended in a compromise peace and the withdrawal of the Aggressor military forces from the North American continent. Fortunately the United States rallied quicker than Aggressor had expected, and stopped his advance.

Now, although Aggressor did not succeed in his invasion of California, he has established himself on several islands in the Caribbean, there maintaining military bases. Also Aggressor has gained increasing power in the leading parties of certain South American countries. At the present time the Aggressor Nation is building a large army with emphasis on making this army air-transportable.

Knowing what we do about Aggressor, we can reasonably believe that it is only a matter of time before Aggressor attempts another invasion of the North American continent.

So much for the history of the fictitious Aggressor Nation.

What is Aggressor? Aggressor is a training aid, a make-believe enemy against whom we can fight on maneuvers during peace time. Its purpose is to add realism to field exercises, small-unit problems, CPX's, and map maneuvers. The old maneuver system of fighting against flags or an enemy which consisted of standard United States Army units was artificial. It did not provide for maneuvers to

continue at night and intelligence training was seriously neglected.

Aggressor is more than just a maneuver enemy. It consists of a nation with its own history, army, and organization, leaders, tactics, supply system, weapons, equipment, and language. Our army has expended a great amount of effort and funds to develop the Aggressor force so as to provide a realistic maneuver enemy as much like an actual enemy as can be produced in peace time. It is in a field exercise against an Aggressor force that units can be tested to determine their proficiency in all of the subjects related to combat.

The need for adequate combat training was a serious weakness in our peace time training. So at Headquarters, Army Ground Forces, during the summer of 1946, the idea of Aggressor was born. The Aggressor idea was proposed to the six armies that summer and was used on an amphibious maneuver in the fall. This maneuver was conducted in California and involved the 2d Infantry Division, which was employed against an Aggressor force consisting of one camouflage company, two small engineer battalions, and a sonic detachment. The sonic detachment had the mission of making realistic battle noises with special equipment. The maneuver was a great success, and as a result the camouflage company and sonic detachment were ordered to Fort Riley and assigned to the Ground General School Center for further development as the permanent basic Aggressor nucleus. The development of devices and means of representing Aggressor is continuing at Fort Riley at the present time.

An Aggressor force can be represented by any United States combat unit. Your company or battalion may be called upon to represent an Aggressor force in a field exercise. Conversely, you may fight against Aggressor. In either case you need to be familiar with what Aggressor is and how it works.

How would Aggressor be used in field exercises involving your unit? The ratio of Aggressor soldiers to United States soldiers is approximately 1 to 4, one Aggressor

soldier for four United States soldiers. Therefore, the unit required to represent Aggressor for a battalion problem would be about a company. In some cases, a reinforced company has been used in battalion problems when it is desired that the Aggressor force simulate a reinforced battalion. This allows for the representation of additional tanks and other mechanized units. The Aggressor force goes to the maneuver area several weeks before the maneuver to prepare the area and train each man to do his part. In the case of a division or corps maneuver, the Aggressor force would begin the preparation of the maneuver area and training on the ground two or three months in advance. Also pre-maneuver training is required for the maneuvering force. The pre-maneuver training of the soldier covers the following subjects: History of Aggressor, Aggressor Army, uniform and distinctive insignia, equipment, prisoners of war, and captured documents.

The old maneuver enemy did not provide for intelligence training. With Aggressor we can train in the intelligence procedures involved in collecting, recording, and reporting enemy information, in handling prisoners of war and enemy documents. Now we have an opportunity to "sell" the value of these intelligence procedures to the soldier.

Aggressor has his own distinctive uniform and insignia. The uniform is jungle green in color. Collar tabs indicate by color the branch of the individual. Red means infantry; white means artillery, yellow means armored, mechanized, or cavalry. Numerals can be superimposed in black on the collar tabs to show the regiment to which the wearer belongs. The divisional insignia consists of a rectangular shaped cloth patch worn on the right shoulder. The color of the patch has the same meaning as the collar tabs.*

To further show you the extent to which the Army has gone in developing Aggressor, look at the field manuals which have been prepared.

FM 30-101, The Maneuver Enemy, is designed as a guide for the orientation of troops who may take part in a ma-

*For further information regarding uniform and insignia see FM 30-101, *The Maneuver Enemy.*

neuver against an Aggressor force. It is also intended for the use of front line soldiers in identifying Aggressor soldiers, equipment, and material. All Aggressor tanks, and other heavy equipment are normally marked with a green equilateral triangle. On vehicles the triangle is generally found on the hood and the front and rear bumpers.

FM 30-102, Handbook on Aggressor Military Forces, which contains the Aggressor history previously outlined, also contains information regarding the organization of Aggressor field forces, his tactics, supply, weapons, equipment, air force, conventional signs and symbols, and a glossary of common Aggressor military terms. The conventional signs and symbols which appear in this manual are those which Aggressor uses on his maps. This is a realistic manual as it is modeled after such manuals developed during World War II which were concerned with our enemies, the Germans, the Japanese, and for a while the Italians. The information it contains is necessarily incomplete. Additional information is added during the course of exercises using Aggressor.

FM 30-103, Aggressor Army Order of Battle,** is intended primarily for the use of order of battle and other specialized intelligence personnel. However, it is interesting to know how it is used.

You are, for example, the S-2 of an infantry regiment engaged in combat against an Aggressor force. A prisoner is captured. On interrogation he states that he is Colonel Pedro Varas. He knows his rights under the Geneva Convention and will say no more. In FM 30-103 we find an "Index of Army Officers." Page 124 discloses the name of our prisoner, and you learn that he commands the 42d Infantry Regiment. The Table of Contents of this manual lists under Section III "Identified Units" which are divided into divisional and nondivisional units. Under divisional units on page 78 you find the 42d Infantry Regiment and learn that it belongs to the 2d Mechanized Division. On page 61 you find the 2d Mechanized Division and the units

**Revised edition recently distributed, dated June 1949.

which compose it. Commander's names are given when known. Here you find listed your prisoner as commander of the 42d Infantry Regiment.

To begin with, you had only the name and rank of the prisoner, but from the manual you have learned that he commands a unit that is a part of a certain division. We can conduce that the 2d Mechanized Division is opposing your unit. This is valuable information for the determination of the enemy's capabilities. You can further extend the information gained using FM 30-103 by consulting FM 30-102 where you find information regarding the organization, armament, and equipment of identified units.

Bear in mind that the use of Aggressor order of battle is realistic. In the event of war, manuals of this type will be available concerning the actual enemy.

FM 30-104, Aggressor Army Representation, is devoted to operations and equipment. In this manual you find what members of an Aggressor force need to know regarding their operations and equipment.

To further inject into field exercises a maximum of realism, Aggressor uses pneumatic equipment. Items of such equipment include the following: ¼-ton truck, 6×6 truck, 105-mm howitzer, and airplane. When a soldier engaged in an operation against Aggressor looks into the enemy's territory, he may see some of this pneumatic equipment. He gets a realistic impression of an enemy situation when pneumatic equipment and other devices are used to represent the enemy. This was not possible with the old method of maneuver.

Take another example of how this pneumatic equipment plays a part in adding realism to field exercises. When reconnaissance aviation takes a photo of a piece of enemy terrain, pneumatic equipment appears on the photo. It shows up like the real thing. So you see that the Aggressor force provides for the training of specialists such as photo interpreter personnel, intelligence personnel of small and large unit headquarters, company commanders, platoon leaders, squad leaders, and the individual front line soldiers. In short, all members of the unit whether large or small,

whether specialists or not, receive more realistic training on maneuvers where an Aggressor force is used than was formerly the case.

Also to add realism to field exercises are certain means of making battle noises. Both sides use blanks and simulator grenades. Sonic equipment is used by Aggressor. The M-74 pyrotechnic signal is used for the purpose of representing artillery fire. Also we have the British 3 Mk 1 gunflash simulator which is used to represent the sound and flash at the position of the enemy artillery piece or battery which is firing. The most recent nomenclature of this item is the simulator, gun flash, M110. It is fired electrically by an igniter. Best results are obtained when it is fired from a tube made for the purpose.*** Figure 2 shows the items required to fire this gunflash simulator. A battery may be used in lieu of the blasting machine.

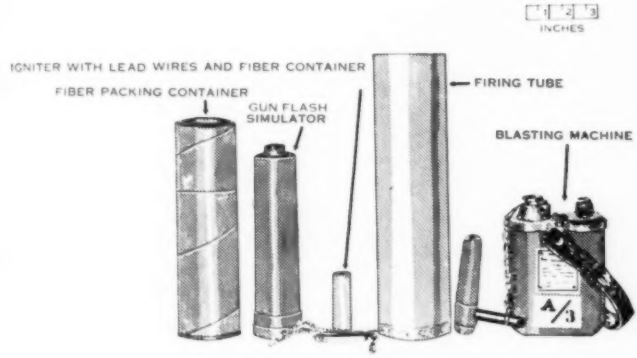


Figure 2. The Battle Noise Devices.

Aggressor is a thoroughly developed training aid. It is designed to add realism to field exercises, small unit problems, CPX's, and map maneuvers. We may fight against Aggressor in a field exercise, or we may be a part of the Aggressor force. In any case we need to know what Aggres-

***See TB 9-1981-7, dated 22 October 1948, for further details regarding the Gunflash Simulator M110.

sor is and how it is used. The several manuals, the pneumatic equipment, the battle noise devices, and the distinctive uniforms and insignia all combine to make Aggressor a great training aid. The passing of the old method of maneuver occurred with the birth of Aggressor. Field exercises can be made more interesting. Better tests of the state of training of units can be made. The added realism provided by Aggressor means that we can train combat units in time of peace to be better prepared to engage an actual enemy in time of war.

The Medical Company, Infantry Regiment

Compiled by
Lieutenant Colonel John R. Darrah, Medical Corps

For those officers who are familiar with the old "Medical Detachment, Infantry Regiment," the enlargement of this unit to a full-sized company is a logical and understandable improvement in the medical service of the infantry regiment and a logical step in speeding up evacuation within the division. The present plan is based entirely upon zonal responsibility, with evacuation responsibility coinciding with the boundaries of tactical responsibility, and with the means of a complete and adequate medical service organic to the unit within that unit's own zone of action.

The medical company is capable of rendering a complete service to the regiment under all average garrison, field and combat conditions within the temperate zone. It is recognized that for special operations it will be necessary to augment the strength of this company. However, under these special conditions the regiment itself requires augmentation, and since each of these operations require special planning, the modification of the medical service is planned and integrated with the plans of the regiment as a whole.

For the purpose of review it is interesting to examine some of the medical support given military units in the past. It is not strange, rather it is logical, that military history and medical history should go hand-in-hand for several centuries. The physiology of digestion, the control of yellow fever, and many other important scientific milestones were the work of American military surgeons working with their units in the field.

Historically, medical service began about the time man began to live a tribal existence. It was about then, in this prehistoric age, that one tribe began to run afoul of another,

probably arguing over the sovereign rights of their hunting grounds. In these affrays there was no real evacuation problem. If someone sprained an ankle and couldn't keep up with the tribe, the carnivores of the forest took care of him that night.

Then of course, when this or that individual began worrying about pain and what injury might mean to him personally, he began to cast about for protection or help. Man was in a dilemma, being forced to decide between his aggressive spirit and the tenderness of his body. As a result, some individuals began to be versed in the exorcising of the pain devils and the administration of herbs designed to banish ills as they cleaned the bowels. So it was that our scientific knowledge was built up; a little fact and a lot of superstition went into beliefs accepted as fact. In some cases centuries would pass before the small grain of truth was separated from the mass of useless superstition, to prove, for example, that it was the splint which cured the fracture, and not the herb poultice in which the arm was wrapped.

Often, too, the cure was worse than the disease. Centuries have passed since man discovered that inbibing the juice of certain fruits gathered in the fall of the year and kept fermenting in a warm place, made him temporarily forget fears. Man still has not learned that there are real woes and drawbacks to this surcease from sorrow, but superstitions persist. Even today, the good press we get with new discoveries makes it very difficult to explain that even penicillin has its limitations.

Most early miltiary surgeons were in the personal employ of the individual prince or nobleman who had mobilized that particular fighting force. For centuries there was no particular arrangement made for the care of the individual soldier. Care of the prince, or nobles, and his staff members, of course, was paramount, because without them the campaign collapsed. It also appeared that there was a difference between the surgeon who repaired the body of the prince and his physician who prescribed the physics.

The early Egyptians were the first to have an organized medical service and a set of regulations to govern it. There

were certain points in favor of this medical code, which also prescribed the treatment for each disease. If a surgeon did not follow the prescribed method, and his noble patient died, he likewise suffered the death penalty. If he did follow the current regulation, and kept abreast of current changes, he was immune from punishment, but was re-required to defend his position before an investigating board. With the ever-brewing intricacies of Egyptian politics, it is supposed that the locked cupboard for poisons and narcotics also appeared about this time.

The Romans also contrived a system of front line evacuation for wounded. A soldier, probably the equivalent of one of our litter bearers, was mounted. One stirrup was elongated so it would almost touch the ground. A wounded man stepped into this stirrup, grabbed the saddle and was whisked away. The scheme had certain limitations and drawbacks, but is worth mentioning as an early example of front line evacuation.

Our first recorded instance of goldbricking likewise appears during this age. It appears in the records of one Appius Claudius in 469 B.C. It seems that he was a foolish and unpopular commander. It was always necessary to remove bandages and search for the wounds they were supposed to cover before turning out his troops.

Other civilizations rose and fell. Science, medicine, and surgery progressed steadily, the knowledge of one civilization being preserved for another in books of savants, physicians, and scholars, even when the heads that conceived it had tumbled on the battlefield. Most Greek science was preserved in the libraries of the Arabs during the Dark Ages and began to appear again after the Renaissance with additions and improvements.

To the great Scandinavian, Gustavus Adolphus, goes the credit for the greatest single advance in conception of medical service. Perhaps it can also be said that he shaped all subsequent military history. Prior to his age, armies were composed not of units but conglomerations of troops under the separate banners of all royal or nearly blue blooded houses involved in that particular altercation. It was not

at all unusual for some particular nobleman to get disgusted, take his troops and go home, or to make an arrangement to go over to the opposition. Since these troops were all levied from his fiefs, his lands and his castle, this was easy.

The Scandinavians, being weak in manpower, concentrated on organization. The battalion began with them as well as an understanding of command responsibility, and a sound officer system. This caused a more or less equitable distribution of available technical personnel, among them, of course, the lower brackets of medical personnel.

With improvements in weapons during the Middle Ages, new types of wounds appeared, and new problems were presented. Whereas the Roman soldier removed his sword from a wound, the head of the English "cloth yard" as well as the rifle ball often remained in the wound and had to be removed by instruments. The arrow was not, of course, a new weapon. In fact the word "chirurgeon" or "surgeon" literally translated from the Greek means "withdrawer of arrows."

Now, a military physician went into the field in those days with some 400 drugs and a book on charms and incantations. Among his drugs were such items as pounded toads, powder of Egyptian Mummy, and many other obnoxious and bizzare items. None of these were a bit of use to a wounded man, so it finally came to pass that the one person possessed of sharp instruments became the military surgeon of the day. This was the company barber. His command post was marked by bloody bandages draped over a pole to dry. Whereas your ancestors sought him out in the Middle Ages, you seek him today by a similar symbol, but for a different purpose.

In early America there were no schools where medicine could be taught. Physicians came from Europe and when one of the young colonists wished to become a surgeon he attached himself to some practitioner and studied under him as an assistant for a number of years. This preceptor system persisted in our country until the 20th century.

Naturally, new ideas were slow to arrive with such teach-

ing methods. The pioneer surgeon can be pictured with broad and somewhat road-stained hands. As he prepared for an operation, he stuck his needles, already threaded, into the lapel of his frock coat where they would be handy when he was ready to close the wound.

Hospitals existed in larger cities, but not in pioneer states and territories. In the army, sizable military hospitals were maintained in larger centers of population, and near the larger troop installations. With the troops there was either a regimental or divisional hospital. This was usually manned by castoffs from the other organizations, and by men detailed for hospital duty. Operations were attempted with these make-shift personnel, with disastrous results.

Even as late as the war between the states, our army fluctuated between two extremes. One was a slow evacuation of the wounded to a distant hospital, the other was to try extensive surgery under very poor field conditions. It is difficult to say which method was worse.

It was soon recognized that a man who had once become a casualty was a total loss. He rarely recovered sufficiently to be of further military service; the loss of manpower was therefore terrific. Advances in medicine and surgery indicated that this should not be true, yet at Gettysburg thousands of wounded men lay on the battlefield for three days before anyone picked them up.

About 1865 Major Jonathan Letterman conceived what was then a radically new idea. His plan was to extend the regimental hospital idea to render simple treatments only and to get the wounded off the battlefield early. He conceived a group of trained medical personnel, regularly assigned to a unit. The function of these personnel was to render necessary treatment only, and to start a casualty back promptly, passing him through successive stations in an evacuation chain. Each echelon was to be equipped to give more and more extensive treatment until the best possible treatment at a base hospital was provided. Simple wounds could be cared for early, and infection avoided, thereby returning some personnel to duty.

Herein was the nucleus of our present day ideas of medical service; first aid, sorting, evacuation by progressive stages (the chain of evacuation), and the designation of specific medical units organic to the tactical unit. So sound was the basic plan, that it was scarcely necessary to change any part of it to meet any of the requirements of the global warfare of World War II. The only changes are modifications dictated by new changes in related organizations, and by additions of modern equipment.

Such radical changes were not well received in Washington, but Letterman had some influence in the field, and in a short time all field armies had adopted his system.

THE MEDICAL COMPANY, INFANTRY REGIMENT

We have spent considerable time in discussing the background of our present medical organization. The progress made by military surgeons has been, and is tremendous. We believe today that we have the answer to all problems of medical service organic to any organization. We begin with the medical company of an infantry regiment. It is complete within itself, capable of rendering a complete medical service to the regiment, and above all, a company organic to that regiment.

The mission of the medical company is to conserve the fighting strength of the regiment by providing adequate medical service. That is its sole purpose. It is organized along a pattern which parallels the regimental organization.

ORGANIZATION OF THE MEDICAL COMPANY

You will notice here that the medical company, infantry regiment, is divided functionally into five parts. One of these is the company headquarters, one is the collecting platoon, and the other three are the three identical battalion medical platoons, one for each infantry battalion.

For those of you who are familiar with the old medical detachment, infantry regiment, let us examine the differences between the old and the new organizations. First, you notice that the medical company has no dental section.

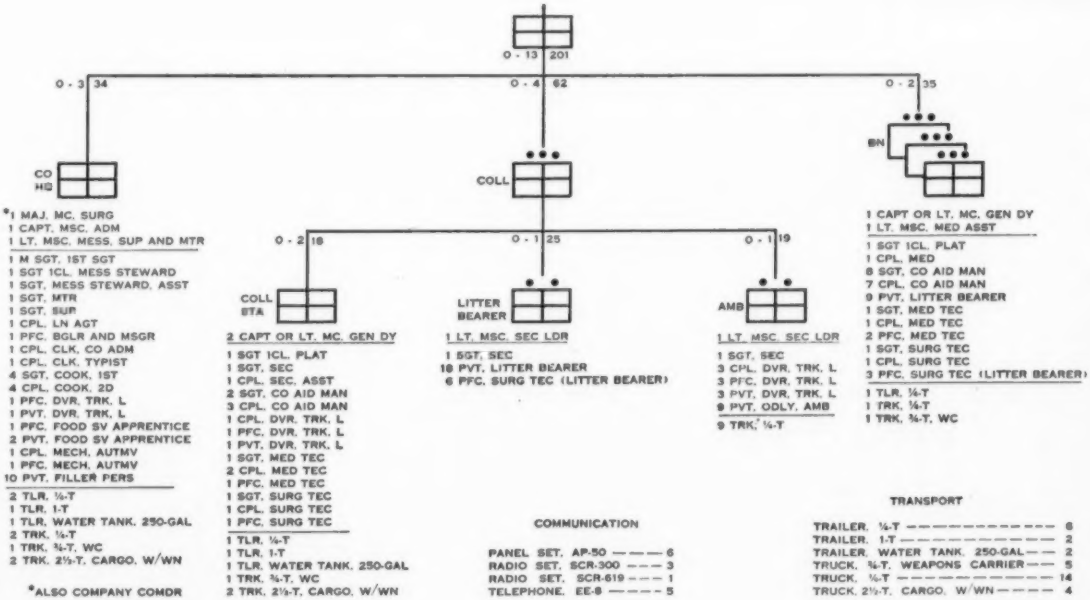

0 - 13 201
0 - 3 34
0 - 4 62
0 - 2 35
CO HQ
COLL
BN
*1 MAJ, MC, SURG
1 CAPT, MSC, ADM
1 LT, MSC, MESS, SUP AND MTR
1 M SGT, 1ST SGT
1 SGT 1CL, MESS STEWARD
1 SGT, MESS STEWARD, ASST
1 SGT, MTR
1 SGT, SUP
1 CPL, LN AGT
1 PFC, BGLR AND MSGR
1 CPL, CLK, CO ADM
1 CPL, CLK, TYPIST
4 SGT, COOK, 1ST
4 CPL, COOK, 2D
1 PFC, DVR, TRK, L
1 PVT, DVR, TRK, L
1 PFC, FOOD SV APPRENTICE
2 PVT, FOOD SV APPRENTICE
1 CPL, MECH, AUTMV
1 PFC, MECH, AUTMV
10 PVT, FILLER PERS
2 TLR, ¼-T
1 TLR, 1-T
1 TLR, WATER TANK, 250-GAL
2 TRK, ¼-T
1 TRK, ¾-T, WC
2 TRK, 2½-T, CARGO, W/WN
*ALSO COMPANY COMDR
0 - 2 18
0 - 1 25
0 - 1 19
COLL STA
LITTER BEARER
AMB
2 CAPT OR LT, MC, GEN DY
1 SGT 1CL, PLAT
1 SGT, SEC
1 CPL, SEC, ASST
2 SGT, CO AID MAN
3 CPL, CO AID MAN
1 CPL, DVR, TRK, L
1 PFC, DVR, TRK, L
1 PVT, DVR, TRK, L
1 SGT, MED TEC
2 CPL, MED TEC
1 PFC, MED TEC
1 SGT, SURG TEC
1 CPL, SURG TEC
1 PFC, SURG TEC
1 TLR, ¼-T
1 TLR, 1-T
1 TLR, WATER TANK, 250-GAL
1 TRK, ¾-T, WC
2 TRK, 2½-T, CARGO, W/WN
1 LT, MSC, SEC LDR
1 SGT, SEC
10 PVT, LITTER BEARER
6 PFC, SURG TEC (LITTER BEARER)
1 LT, MSC, SEC LDR
1 SGT, SEC
3 CPL, DVR, TRK, L
3 PFC, DVR, TRK, L
3 PVT, DVR, TRK, L
9 PVT, ODLY, AMB
9 TRK, ¼-T
1 CAPT OR LT, MC, GEN DY
1 LT, MSC, MED ASST
1 SGT 1CL, PLAT
1 CPL, MED
8 SGT, CO AID MAN
7 CPL, CO AID MAN
9 PVT, LITTER BEARER
1 SGT, MED TEC
1 CPL, MED TEC
2 PFC, MED TEC
1 SGT, SURG TEC
1 CPL, SURG TEC
3 PFC, SURG TEC (LITTER BEARER)
1 TLR, ¼-T
1 TRK, ¼-T
1 TRK, ¾-T, WC
COMMUNICATION
PANEL SET, AP-50 — — — 6
RADIO SET, SCR-300 — — 3
RADIO SET, SCR-619 — — 1
TELEPHONE, EE-8 — — — 5
TRANSPORT
TRAILER, ¼-T — — — — — — — — — — — 6
TRAILER, 1-T — — — — — — — — — — — 2
TRAILER, WATER TANK, 250-GAL — — 2
TRUCK, ¾-T, WEAPONS CARRIER — — 5
TRUCK, ¼-T — — — — — — — — — — — 14
TRUCK, 2½-T, CARGO, W/WN — — — — 4

Figure 1.—Organization of the Medical Company, Infantry Regiment.

The dental section is still available, but has been moved back to the medical battalion, where all dentists in the division work out of a central pool.

Also notice that there is no regimental aid station. Let us repeat that — *no regimental aid station*. The regimental aid station has been absorbed by the larger collecting station. In its place, a company aid man is now provided to headquarters company, and evacuation is arranged by him directly to the collecting station, which is usually at some distance from the regimental command post. The collecting station which used to be established by the medical battalion in support of the regiment has now been transferred to the regiment and is a part of it. Notice that this places the entire control of the regimental evacuation under control of the regimental surgeon. Notice also that the litter bearers of the old collecting company have been transferred to the regiment along with the collecting station, and that these litter bearers are also reinforced by an ambulance section of nine vehicles. This places all facilities for evacuation under one command. All support to the battalions of the regiment is instantly available and under control of the regimental surgeon. If he wishes to shift litter bearer support, he does so. It is no longer necessary to confer with a collecting company commander and to clear through the medical battalion or through division.

Now for the details of the organization of the medical company. It is commanded by a medical officer, a major in the Medical Corps. He functions in a dual capacity. He is a staff officer on the special staff of the regimental commander, and he is also commander of the medical company. His headquarters reflects his dual capacity, because in it are prepared all the medical statistics, sanitary, and casualty reports of the regiment. This is a large amount of paper work, and its importance is recognized by a T/O&E which allots one of the few standard typewriters, 14-inch carriage, to this company.

Besides being the administrative office for the regiment for all medical reports, the medical company headquarters carries on the same company administration carried on by

every other company in the regiment. It is a company just like all the rest, and subject to the same morning reports and casualty reports. The medical company even has to keep a sick book like the others.

There are several important supply functions carried on by the medical company headquarters. The first of these is the routine company supply of shirts, shoes, and barracks bags common to all companies. The more important supply function as far as the regiment is concerned is the medical supply. The medical company supply section procures for the regiment's use all expendable medical supplies. This includes drugs, dressings, blood plasma, adhesive tape, etc. These are procured in the field from the division supply dump on informal requisition; often a verbal request is all that is needed. There is no accountability on these supplies, and they are furnished as conveniently and rapidly as possible.

The medical company headquarters distributes medical supplies to the battalion medical platoons for their aid stations as needed, again by informal requisition.

This does not include medical department supplies normally furnished to all troops. Such items as atabrine, foot powder, etc, used up by the regiment at a uniform rate become class I supplies and go out to the troops through normal supply channels. They are not picked up at an aid station merely because they happen to be medical department items. The same thing applies to the first aid packet which is a part of every soldier's individual equipment. As such it is class II supply, like his belt, or the QM pouch it goes into.

We next consider a supply system unique to the medical department. This is the property exchange in class II and IV items which are part of the medical company's equipment. Every aid station starts off with a certain number of splints, litters, and blankets to take care of casualties. These are part of the T/E equipment. Whenever a casualty is sent out, some of this equipment goes with him. Naturally, we do not strip all the warm blankets off a man just to get our property records straight. Nor is it efficient to keep requisitioning such articles to make up shortages. The way

we keep our equipment at T/E levels is simple. Whenever a casualty passes from one unit's responsibility to another, the giving unit takes back in exchange item for item whatever is sent out with the casualty. For example, when a casualty is loaded on an ambulance, the ambulance drops off an empty litter. If the man is wearing a splint, the ambulance drops off a splint, if he is wrapped in three blankets, they hand over three blankets to the aid station. When the ambulance unloads the casualty in the rear at the regimental collecting station, or the division clearing station, they pick up a litter, splint, and three blankets to exchange on the next trip. This keeps every medical installation even on T/E equipment at all times. The process of property exchange continues clear back to ZI hospitals. Requisitions are only necessary to replace losses and breakage.

Another supply function of the medical company is the collection of arms and other organization equipment from casualties. These are usually collected at the collecting station, and are picked up daily by the regimental S-4 to be put back into supply channels. Ammunition should be left with the frontline unit, but the arms usually accompany the soldier as far as the collecting station. Individual items of equipment, such as mess gear and helmets usually go with him to the rear.

Another method of arms collection is sometimes used. This is collection at the battalion aid station. However, the battalion aid station moves frequently and it is usually unwise to try to collect arms there, since they would have to be picked up too frequently, or would have to be abandoned when the aid station moves.

The medical company commander is responsible for the training of his company, both in basic subjects and in special medical subjects. In this respect his training responsibilities are similar to those of any other company commander. However, with his dual capacity, this same officer, as regimental surgeon, supervises the medical training of the entire regiment in such matters as first aid, field sanitation, and preventive medicine. The medical

department does not actually conduct this training; it only supervises it and helps plan it.

There are two other very important components of the medical company headquarters. One of these is the motor pool, and the other is the company kitchen. The motor pool is large for a company, but it must be remembered that there are nine special purpose vehicles in it. That is, nine ¼-ton ambulances in addition to the usual kitchen, supply, and administrative vehicles. Ambulances and most other medical vehicles are for emergency use. They must be kept in shape and ready to go at any time. They *are emergency vehicles*, and are not used for routine purposes. About the only people routinely riding in an ambulance besides the driver are the litter bearers moving into forward positions. They ride as far forward as the vehicles can go, and then work forward from there on foot.

The company kitchen in the medical company is set up near the collecting station. Most companies select their CP sites first, and put the kitchen in relation to the CP and the location of the company. This is not true in the medical company. The kitchen here feeds casualties as well as medical personnel. Since casualties are no respecters of meal hours, this kitchen must operate on a 24-hour basis. Not only do litter bearers and ambulance drivers come in at odd hours, but casualties themselves are usually in need of nourishment. It is a well established fact that hot drinks like coffee, tea, and cocoa are stimulants for a casualty near shock. Nourishment like hot soups also are stimulating, and by furnishing food, suffering is relieved. The casualty is also in better condition to promote healthy healing if his physical needs are cared for early. Special rations are drawn for the collecting station, and prepared under the directions of the medical officers in charge of the battalion. Since this kitchen enjoys the privileges of and has the responsibilities of a hospital kitchen, it rarely reverts to regimental trains control, but remains with the company at all times. It is usually the first kitchen set up in special operations, solely because of its value in treatment of casualties.

Naturally, since company headquarters personnel also want to eat, the company headquarters is established near the kitchen, and near the collecting station. The location of the collecting station, therefore, determines the location of the company headquarters. The needs of evacuation are met first, with emphasis on the evacuation chain and its functions. This may bear no relationship to other regimental functions. The medical company moves installations as the need arises. Its moves have no relationship to either the moves made by regimental headquarters, because of demands in control, or moves made by service company because of demands made on the supply system. The evacuation chain determines the requirements.

We have already discussed the collecting platoon, but a more detailed examination of this important medical installation seems indicated. The platoon strength is 4 officers and 62 enlisted men. Two of these officers are medical officers who operate the collecting station, where casualties are treated, sorted, and disposed. The other two officers are Medical Service Corps officers, who are in charge of the litter bearer and ambulance sections respectively. These two sections evacuate the battalion aid stations established by the battalion medical platoons. It is the policy to evacuate on wheels from as far forward as practicable. In case the ¼-ton ambulances are able to reach all the battalion aid stations, the litter bearers of the collecting platoon do not sit idly by waiting for the regiment to move on to more rugged terrain. These litter bearers are sent out to help those of the battalion medical platoons. Litter bearers are never held in reserve, they are like artillery support. They may not be all used all the time, but each gets in his round trip for casualties when the turn comes up. Even when vehicles can be used ahead of aid stations, litter bearers are still used to bring in casualties from the front to the forward ambulance loading points.

Division ambulances are responsible for evacuating the regimental collecting station. These are the ¾-ton ambulances, and usually one or two vehicles from the division ambulance shuttle system are present in the collecting station at all times.

There are five aid men in the collecting platoon. This may seem an odd place for aid men, with all the technicians around. Actually, these aid men do not work in the collecting station. They are attached to the non-battalion units of the regiment. There is one aid man each with regimental headquarters company, service company, and the tank company. There are two aid men with the heavy mortar company. These are the regularly assigned aid men from the collecting platoon. If more aid men are desired for these units, they may be taken from the filler personnel in company headquarters. However, bear in mind that these filler personnel are primarily for assignment to the battalion medical platoons to keep them up to full strength. Evacuation of the non-battalion units, when they are committed, is through the battalion aid station of the battalion with which they are operating.

The three battalion medical platoons are identical. Each is composed of two officers, a medical officer, a medical service officer, and 35 enlisted men. Functionally, the platoon is divided into three sections. These are the aid station section, the litter bearer section, and the company aid section. The last group consists of 15 aid men assigned to the lettered companies of the battalion on the basis of one aid man per combat platoon. That makes four aid men per rifle company and three for a heavy weapons company.

The litter bearer section has 12 men. Nine are privates and three are NCOs who have surgical technician ratings. This gives us three 4-man squads, with a surgical technician on each squad. These litter bearer squads evacuate the front line to the battalion aid station. The personal medical equipment of litter bearers is similar to that of aid men, but in addition, each squad carries one aluminum pole litter.

The balance of the men, except for two drivers, constitute the aid station section. The medical officer commands the entire platoon, sending out litter bearers for casualties, and personally supervising their care in the aid station. He is also the battalion surgeon on the battalion commander's staff — again, a dual capacity similar to that

of the regimental surgeon — but there are differences. The regimental surgeon sets the policies, and decides how far the battalion surgeon can go in supervision of sanitary training and such things that come properly under the administrative control of regimental headquarters. The regimental surgeon, on the other hand, is rarely personally in charge of the care of casualties.

The medical equipment of the battalion medical platoons is packed in canvas cases and carried in combat on pack boards. There is a complete duplication of equipment, so that an aid station may operate a lightly wounded and a seriously wounded section, or may split into two aid stations. There is also some heavier equipment of a dispensary type, not normally carried in combat, but usually reserved for bivouac or similar situations.

The collecting station equipment is much bulkier, and because the collecting station depends considerably upon roads and vehicles, this equipment is rarely man-carried. However, there are sufficient packboards to carry selected equipment and supplies in any difficult situation requiring the establishment of such a forward element as a collecting or holding point or litter relay post.

Before leaving the subject or organization of the medical company we should consider the transportation of the company as a whole. There are 23 vehicles under the present T/O&E. Failure of any one is apt to be reflected in the evacuation chain. The vehicles of primary interest to the regiment are the nine ¼-ton ambulances of the collecting platoon. These are the emergency vehicles of the regiment, restricted to use by casualties only. We have already discussed their employment.

Of equal importance to the medical company are the administrative vehicles it employs. There are five other ¼-ton trucks. There is one in each battalion medical platoon as a general purpose standby vehicle, one at company headquarters for the same purpose, and one at company headquarters with an SCR-619 radio for the use of the regimental surgeon.

In addition to the ¼-ton truck each battalion medical platoon also has a ¾-ton truck to haul heavy aid station equipment not normally employed in combat. A ¼-ton trailer completes their transportation. Company headquarters has a 2½-ton truck for the kitchen, with a 250-gallon water tank trailer. There is another 2½-ton truck with two 1-ton trailers usually used as the supply truck. The last vehicle in company headquarters is a ¾-ton weapon carrier used as a maintenance truck.

The collecting platoon has its own transportation for use in connection with the collecting station. This consists of two 2½-ton trucks, a ¾-ton truck, a 1-ton trailer, a ¼-ton trailer and another 250-gallon water tank trailer. Normally, collecting station equipment is divided between the two 2½-ton trucks in approximately equal loads. This permits one station to be opened and operating, with equipment available to either expand that station, or to move out and open another station somewhere else.

The ¾-ton truck is used to transport collecting station personnel, light equipment or for moving a part of a station.

The litter bearers have no transportation, as previously explained.

A great many drivers in the medical company also act in other capacities. For example, the vehicles of the battalion medical platoon are driven by aid station personnel.

RELATIONSHIP OF REGIMENTAL AND DIVISION EVACUATION SYSTEMS

Having covered the antecedents of our present regimental medical company, and its present organization, we now turn to its present functions and means of employing it in the field. We have said that the medical company is capable of delivering a complete medical service in the field. It is possible for a battalion surgeon to remove an appendix in the field. He has instruments to do that. He may even have the inclination, if he can get a patient to submit. Those extensive procedures however, are "definitive" treatment. They follow a set pattern in each case, and

are designed as being definite in nature and curative in purpose. Except for minor injuries or sicknesses that can be treated by "band-aids" and aspirin, it is not our desire to give definitive treatments under these circumstances. There is a time and place for everything and such treatment belongs where progress can be checked and the treatment adjusted to the needs of the patient. That means at an installation capable of hospitalization. At the battalion aid stations we intend to give only "emergency" treatments; as much as is necessary to save life and limb, to make the patient comfortable and prepare him for movement to a place where he can be looked after better.

Forward units are capable of a great deal of definitive care, when necessity arises, but their function is primarily that of evacuation. In that process of evacuation there is a strong continuity, a definitely progressive plan where no man is held longer in a forward area than is necessary unless that installation can return him to duty within a reasonable time length and well within their capabilities. Each installation should be looked upon as a check point in the chain of evacuation and not as a complete echelon, or level of treatment. The time it is going to take a man to get well, and the amount of treatment required are the determining factors.

In some instances, of course, where treatments are standardized, definitive treatment can start well forward, as soon as a diagnosis is made. The first medication for malaria may be given in a battalion aid station, and the last dose in a course at some general hospital. Ordinarily, we do not see much definitive treatment given to battle casualties before they reach the division clearing station.

Now with these points in mind, we can arbitrarily set limitations on the medical installations at any level. Within the regiment, the stress is on collection of casualties and their evacuation to the regimental collecting station. Division evacuates all casualties from the regimental collecting stations to the division clearing station, where they are sorted and prepared for further treatment or evacuation.

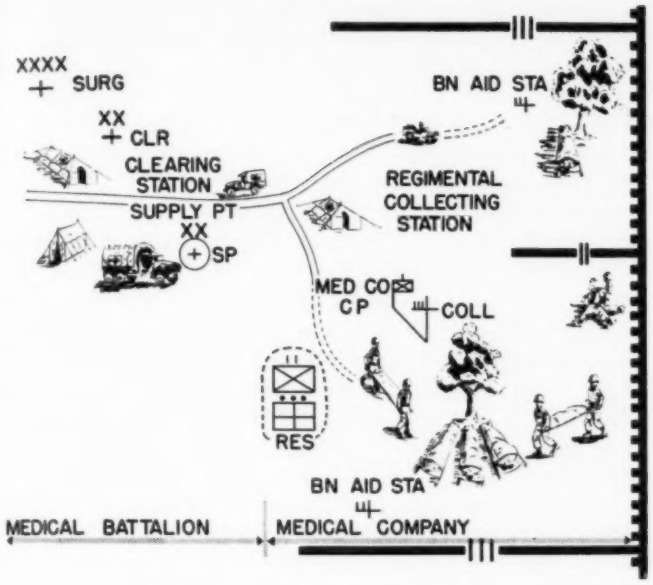


Figure 2.—The Chain of Evacuation.

Here we see a diagram of the typical evacuation net of one regiment in a typical situation. You will notice here that all methods of evacuation are shown, and that is usually a true picture. Some terrain requires more litter bearers than others, and one battalion aid station can usually be reached by vehicle. You see the casualties feeding back to the regimental collecting station, and finally reaching the division clearing station. The zone of responsibility for the regiment is everything ahead of the collecting station, including any units attached to the regiment or present in the regimental area. Division responsibility begins at the back door of the collecting station.

EMPLOYMENT OF THE MEDICAL COMPANY

This is a very typical textbook picture of any situation, two battalions on the line, one in reserve. The frontage and

depths depicted are about typical in their ratio to each other. The reserve is in about a normal position. The medical company was designed to fit into just such a picture. There is a battalion medical platoon for each of these battalions, and a collecting system to bring casualties from all three back to the regimental rear for evacuation by division, giving them good care all the way.

There is flexibility in that organization and support in collecting elements can be shifted anywhere that casualties are heaviest.

Examine this situation. Remember that the job of the medical company is to support the regiment. Then apply the same principles to the medical company that you apply to any other company in a supporting role. Don't worry about the technicalities of medical service. There are none. If you are going to bring elements of the mortar company up to support an attack, casualties can be expected to be heavy where that support is needed so more medical troops will be needed in the locality of the attack. If the regiment pulls back and organizes defensive positions in depth, the medical installations go back also. If the regiment pushes all troops forward to launch an attack, the aid stations are also forward, because that is where the support will be needed. The same principles apply to all units.

EMPLOYMENT OF THE MEDICAL COMPANY IN SPECIAL SITUATIONS

There are some conditions where our general situation does not apply. One of these is in garrison, or in a rehabilitation area. Here the regimental surgeon, as a company commander, is faced with problems of his own in troop training. In combat the battalion medical platoons are usually attached to their respective battalions, but in garrison it may be advisable to operate only one central dispensary for the entire regiment in order to leave more men available for training. There is also a problem of furnishing instructors or personnel for training of the regiment in subjects such as first aid and field sanitation.

Here again we see the flexibility of the present organization. One battalion platoon may operate a central dispensary, or perhaps two dispensaries. Or the collecting station may take all the sick call. At any rate, there are enough possible solutions to meet all needs and still leave men for training.

Assuming that our training period is over, and we wish to apply our general field principles to other special conditions, we refer first to the general combat situation we have already examined. That will give us a basis for modification.

In establishing an aid station, a battalion surgeon must first have certain information as to the tactical situation, the terrain, and the scheme of the proposed operation. He then makes his estimate of the situation, formulates his plan, and gives his order to the battalion medical platoon—just like any platoon leader.

In selecting a site for the aid station, he considers, first of all, the tactical situation — what his mission will be, and where he will have to be to accomplish it. He will next consider how to accomplish that mission with a minimum of hazard to himself and his platoon; and so he will seek defilade, cover, and concealment. He will consider terrain approaches to the front, which will be natural lines of drift for casualties to return by. He will be alert for convergences of these natural lines of drift. He will look for a road so ambulances can evacuate his station. All these and other factors we can list as follows:

1. Tactical operation of the unit supported.
2. Expected areas of casualty density.
3. Protection afforded by defilade.
4. Convergence of lines of drift.
5. Length of litter haul.
6. Proximity of military targets.
7. Concealment and security.
8. Protection from the elements.
9. Accessible routes to front and rear for evacuation.

The battalion surgeons of the battalion in contact with the enemy will go out and establish their aid stations, if

they have not already done so, or will move to more desirable locations. The aid station of the reserve battalion will not be established. That battalion commander does not know which way he is going to jump, and his battalion surgeon likewise will be standing by to treat casualties from a successful penetration by the enemy to present locations, or to move to either flank, or to counterattack, or to pass through either of the other battalions. He has no desire to be left behind when the battalion moves so he will unpack only enough supplies to take care of the routine cases in the reserve positions. The same attitude of waiting and readiness will probably be noticed in the heavy weapons company and other groups that will not be expected to break out all their ammunition just because they are sitting down momentarily.

All three battalion medical platoons, whether open for business or not, will maintain contact with the medical company headquarters and the collecting platoon. This may be through litter bearers, or through a liaison agent from the company headquarters. If the battalion surgeon expects to get his aid station evacuated he must keep the regimental surgeon informed of his whereabouts, and give due notice every time he moves. Initial aid station locations are usually selected with care and are indicated in the battalion operation order, but subsequent station moves are not usually covered by formal announcements. In each case also, a new location must be approved by the battalion commander. This prevents moving into an area already selected for gun positions, or one which is likely to become a hot spot later. The move, when completed, is reported to the two persons most concerned, the battalion commander and the regimental surgeon.

In general, the factors governing the location of collecting station sites are the same as those for battalion aid stations. They are:

1. Central location with respect to the battalion aid stations.
2. Defilade.
3. Cover and concealment.
4. Accessibility to ambulances.

We notice, however, that it is important to get roads *front* and *rear*. Our own ambulances are coming from the front, and division ambulances will come up from our rear to evacuate casualties to the clearing station. Also the size of the collecting station and the medical company headquarters with it often makes its complete concealment impossible. It usually is a close decision whether to move out into the open and depend on the Red Cross for protection, or to try to conceal the installation. When concealment is desired, the Geneva Convention markers are covered. The collecting station is the largest medical installation that can be concealed. It can be completely hidden in an area the size of a football field if fair cover is available. It is generally considered advisable to conceal collecting stations for security reasons.

Location of the regimental collecting station is reported to the regimental commander for approval of the site selected. The regimental S-4 is charged with coordination of the details of supply and evacuation and can usually give the necessary approval. He is informed at the time news of a move is given to the medical battalion commander who must know it to effect ambulance evacuation to the clearing station. Contact is usually maintained by a liaison officer or NCO from the ambulance company of the medical battalion. It is also advisable to inform the division surgeon of collecting station sites, and to keep the battalion surgeons similarly informed.

Since few military situations remain long in stalemate, there is more or less a constant shifting of troops. A successful force moving forward must keep its support with it. Consequently, it is not advisable for medical support to unpack all bags and baggage at each halt and go to housekeeping. Supplies are available in the quantities needed for each situation, and excessive unpacking is avoided. Likewise medical installations, groups and sections naturally divide into functional parts so that two or more stations can be set up. This is especially important in moving situations where a station is needed some distance forward while there are still casualties in the old one. One section can move forward, and establish a new station,

while the other completes the work at the old one. We have shown you how the battalion aid station and the collecting station naturally split for this forward displacement. In economy of movement and time it is important that each displacement be as far forward as possible to cut down on the time lost by several short moves. Speed of evacuation is also essential because a station loaded with casualties cannot be moved, and as troops get farther away the delay becomes even worse.

"Stations" in a moving situation may be emergency points only, and the "echelons" are descriptive terms only. Movement of patients does not stop at either point.

Considerable routine assistance is given to the evacuation system by troops that are not medical personnel. Information is vital to successful and speedy evacuation. Timely messages and reports on situation changes are of great value to persons operating an evacuation system. Also, the routine use of empty returning supply vehicles to transport wounded greatly speeds evacuation. No vehicle should go to the rear empty if there are wounded in the field.

Among medical installations, maintenance of their own communications is essential. As to means, the most accurate and reliable contact is and always has been the oral or written message relayed from echelon to echelon by litter bearers and ambulance drivers. The principal mechanical means provided by the T/O&E is the telephone, but wire for these telephones must be laid by wire crews from regimental and battalion headquarters companies. There are five telephones in the medical company, one for each aid station, one for the collecting station, and one for the company headquarters.

Radios in the medical company have no specially designated operators, but are used as a part of the communications system.

LOCATION OF AID STATIONS

We have listed earlier several desirable features to look for when you locate an aid station, or a collecting station.

These features for station sites are all desirable, but not always attainable. An aid station location is a good deal like a CP location. You want to put it where it will do the most good, and you want to keep it safe and hidden. First, consider the mission. What must this aid station do? Where are the casualties going to be heaviest? Find the best defiladed and protected spot for the aid station. Remember, wounded men can't climb hills, they drift down stream beds and draws. Take that into consideration.

Remember that medical troops follow the troops they serve. They have no weapons, so it is not feasible to send them out ahead. Neither is it wise to leave them so far behind they cannot give proper support. A battalion aid station is somewhere near the rear elements of the battalion, just behind the reserve company, for example, because there is no use evacuating men forward to an aid station before they can go rearward to a hospital. In a like manner, the collecting station is usually to the rear of the reserve battalion. Now let us again consider our typical situation (see Figure 2). If we have the initiative, that is, if we are attacking, all elements of the battalions will be crowding the line of departure. The medical units follow the same principle. Put the aid station well forward, and usually behind the company where casualties are likely to be heaviest. The heavy weapons are up close, the artillery support is close, everything else is well up forward, and so is the aid station. Initial casualties are apt to be high and you want all kinds of support up there where it will do the most good.

Naturally, in such a situation the aid station doesn't unpack every bandage and lay everything out in neat rows ready to operate. Neither do the combat elements unload every last round of ammunition. You unpack what you think you need, enough to get started, and hold the rest in readiness. The situation may change abruptly, and the battalion surgeon must be on the alert to follow it. There may be a break through, and a rapid forward displacement. Or the enemy may counterattack and push you clear back to the last prepared defense. In either case there won't be time

to pick up spare spools of adhesive tape before moving. There is enough material in the set of packs to open a good sized station, and a fully opened station doesn't open the extra packs until their contents are needed. That is what we mean by being partially opened and alert for changes.

Another feature of the attack, when numerous casualties are expected, is the reinforcement of the battalion medical platoon by litter bearers. Normally, these will come from the collecting platoon. The closer your aid station is to a road which can be reached by ¼-ton ambulance, the more litter bearer support there is available from the collecting platoon.

In the attack, we also are forced to take certain risks. Knowing that casualties are going to be numerous and knowing that the closer we get to the line of departure, the longer we can operate without displacement, we often pick a less desirable aid station site from the standpoint of protection, because it is a better location to work from. That is a calculated risk. We are hoping the success of the troops out front will make an otherwise risky spot safe and serene when they carry out the attack.

Now supposing in our typical situation we are not attacking. Suppose we are ordered to hold, or suppose we are actually getting ready to defend a line against great odds. What happens to the troops? They are spread out in great depth. There is a series of positions tied in with each other. Fires are plotted, and counterattack plans made. Do we want the aid station in the middle of all this organization. Or in front of it? By no means. If the troops are in depth, medical support will also be deep. We take the aid station back behind the reserve company, just as before and since everyone else is digging in and setting up housekeeping on a more or less permanent basis, the aid station will do likewise. It will be organized also—tactically organized, that is, dug in and protected. It is always professionally organized.

Time is now less essential. It isn't necessary to treat and evacuate casualties immediately to remain mobile, because you plan on staying on location for some time. Even

the company aid man is more or less static, and can take time out for an extra wrap of bandage, and maybe a fancier knot.

Security is of great importance to the aid station which is apt to be in for quite a bit of shelling. It must also be careful not to advertise its location, because enemy intelligence can spot troop locations by identifying the location and types of medical installations in an area.

In static situations, medical plans are often quite elaborate. Company aid posts may be set up by pooling aid men in a company. Litter and evacuation routes may be marked with signs. Ambulances may call at aid stations on regular schedules.

By applying the covering principles we can fit the medical support into almost any type of situation we meet. Bear in mind that the principles of employment are just the same as for any other supporting arm or service. You can for example, use almost the same words to describe the location of sites for the heavy mortars.

Let us consider a situation which has been static for some time but is now building up for a breakout, such as on a beachhead. It is going to be an attack, and on a large scale. We build up our medical support, both in supplies and personnel, and move forward to a position where we can support the attack. When the S-4 starts stocking ammunition, and S-1 gets the replacements, we draw more adhesive tape and ask for more litter bearers.

After the break through we anticipate that the enemy will be completely demoralized and on the run. Therefore, the aid station must be ready to clear out at a moment's notice and follow the battalion. Casualties will be evacuated by the collecting platoon, and the battalion medical platoon assumes extreme mobility. Contact must be maintained with the battalion to receive and care for its casualties, and contact must be maintained with the collecting platoon so that casualties can be evacuated. Liaison is usually established between the battalion medical platoon and medical company headquarters by ambulance and by use of contact agents from the company headquarters. There is

only one liaison NCO on the company T/O&E, so the regimental surgeon must manufacture a liaison group from available personnel.

Fortunately, in a pursuit, casualties are few in number, it being a well established principle of war that the fire of a fleeing army is inaccurate when fired over the shoulder. This somewhat simplifies the problem of evacuation, but the faster the pursuit, the more difficult it is to maintain contact. Often pursuits are mechanized. Troops may be motorized and combined with armored units. In these cases movement is rapid and great distances may be covered. In such instances it is often wise to augment the battalion medical platoon so that it is self-sustaining and attach a number of ambulances to it. It is easier for them to find a stationary location in the rear than it is for the stationary location to find them, or the place where they used to be.

In almost all administrative movements there is no great expectation of casualties. When a unit moves long distances, by sea, or by land, its organic medical support is able to care for only its internal medical problems. They are not equipped for evacuation on a coast journey, for example. In these cases, outside medical support is needed, and medical installations along the route are utilized. It is essential that proper installations be designated in the movement plan so that sick and injured may be properly taken care of at regular or emergency stops.

At sea, the transport receives and cares for troops unable to accompany the unit ashore.

In general, in all marches or movements, medical troops are normally distributed throughout the column to provide the greatest availability for service to march casualties.

An ambulance, or vehicle designated as such should follow each march unit. This vehicle is not loaded down with equipment or personnel, but stands ready to receive casualties on call. This emergency vehicle should just precede the wrecker or maintenance truck in the column, otherwise it follows all other vehicles. It is most embarrassing to discover it broken down and five miles behind when

needed if it follows the maintenance truck also. A vehicle of medical personnel, usually including the unit surgeon goes along with the ambulance in the column. Although perhaps more comfortable, the unit surgeon should not ride in the ambulance because he is apt to find himself afoot if that vehicle is sent to the rear with march casualties.

The same principles apply to foot marches. Ambulances are usually attached to pick up march casualties, and usually transport litter bearers until space is needed to accommodate march casualties. Litter bearers' work is very exhausting and their strength is saved whenever possible.

We must also consider another kind of movement. This is the withdrawal, or retrograde movement, when we are pursued, or threatened. In the first place, we like to imagine that we will be able to get all our casualties out with us, but consider what that entails. To accomplish this end we have time and distance factors both against us. Time is decreasing rapidly, and our distances for evacuation become greater because other installations are also moving back. There is only one possible solution if we are to save the casualties and that is to increase the means for evacuation. It will usually be necessary to designate additional vehicles as ambulances, and above all, no vehicle should ever return to the rear without its quota of wounded.

In retrograde movements, proceeding according to a plan, the evacuation problem must be coordinated with the time schedule and sufficient extra means allotted to insure its operation.

The decision to abandon casualties to the enemy is a command decision. It is not a function of the surgeon in charge. When necessary, it must be made and the surgeon told what personnel he will leave to care for those wounded until their care is taken over by the enemy.

Special operations, such as amphibious, and airborne assaults require special medical planning which usually follows the same principles we have covered. Because of limited transportation space (by sea or air) some modification of basic equipment is required. In such operations, initial evacuation is slow and laborious. It is necessary to

augment the manpower of medical troops with advance units to handle the initial work, after which normal land evacuation systems establish themselves as vehicles become available. In amphibious operations, the battalion surgeon is responsible for evacuation only as far as his aid station — the same as in ordinary land warfare. The problem of the regimental surgeon who evacuates the aid stations is more difficult until he receives sufficient vehicles to establish a complete system. Airborne operations usually entail the holding of casualties for some time until a glider pick-up system at least is established. Often casualties must be held until a suitable airstrip is captured or built.

Mountain warfare again varies our basic plans. Here all evacuation is by hand carry. In the mountains—and in jungles—it takes six men to carry a casualty, not four, and the litter carry is usually much shorter, and requires plenty of relief teams. A litter bearer team can carry a casualty a maximum of 1,000 yards on flat terrain.

In cold weather, and in cold and wet climates, evacuation of casualties presents additional problems because of the extreme danger of shock, and also because of the lack of suitable vehicles.

In each case the plan covering a special operation will be a variation of the basic organization and employment. Each has its special problems which require special planning and special training for medical service.

Too Much Supervision?*

*EDITOR'S NOTE: This article representing the opinion of the writer, does not necessarily reflect the thought or opinion of the Infantry School. It is published for its thought-provoking content.

Can that important command duty—supervision—be overdone? If so, when does supervision end and interference begin?

Is a platoon leader, for example, supervising or interfering when he tells his squad leaders how to run their squads down to the last small detail?

You can answer that last question in two ways—yes, he is interfering, and no, he isn't. If you say the platoon leader is not interfering, you may try to justify your stand by saying that that is the way the platoon leader wants to run his platoon. It's his platoon, isn't it? He's the boss. What he says goes—right down to the marking on the underwear.

You can get yourself into a hot argument with that stand, though; the other school of thought will counter: "What are your squad leaders for, Big Boy—decoration? Don't you give them *any* leeway?"

At this point, stop and think. Do you supervise your juniors to death? Run the details of their jobs, whether they be squad leader, lieutenant, captain, or major. Wear the stripes as well as the bars. Or wear the bars as well as the leaves.

As an instructor, are you so overwhelmed with a desire to help that you pitch in and assist Private Doe to dismantle that machine gun—when good sense tells you he is doing very well by himself?

As an administrator, do you rewrite your executive officer's letter when that letter has said, in effect, what you wanted it to say?

If your answer is affirmative to these questions, you can still justify yourself by saying that you get the job done—it's your way of operating.

So what does this make you? The answer is not flattering: You're a one man show. You can't trust anyone to do a job. You have to do everything yourself. You don't know how to delegate your authority.

What happens beneath the surface in the one man show, in the squad, for instance, that is run by the platoon leader?

First, the slow but sure stifling of the squad leader's initiative. Even the best squad leader will eventually say to himself, "What's the use? I know my job but I'm just along for the ride. The Lieutenant is running the squad for me."

Second, resentment and dissatisfaction. The squad leader will resent this continual affront to his dignity and his authority. And out of this will grow dissatisfaction, because the men will soon lose respect for a squad leader who is that in name only.

And third, actual disloyalty — born from the disintegration of initiative and fostered by resentment and dissatisfaction.

While the squad has been given as an example, would not the same situation apply to the lieutenant, the captain, and the major—on up the line?

You can make a case for this. You can make a case against it. For there can be no argument against supervision. More is needed in some cases than in others. But if your junior knows his job, let him do it within the confines of your overall objective. It should take no 20/20 eye to see that imaginary line between supervision and interference—an imaginary line that lies somewhere between that junior's knowledge and ability and the goal of your team.

The Rifle Company in Attack: A Problem

Compiled by Major George A. Clayton, Infantry

This is not an article—this is a problem. All you need to solve it is the map shown in Figure 1 and a knowledge of the subject. There are six requirements. Solutions are given to all requirements, plus a discussion of each solution. To get the most benefit from this problem, it is recommended that you solve each requirement as you come to it, without referring to the solution that follows.

THE PROBLEM

1. *General situation.* For the past two days the 1st Infantry Regiment has been attacking to the northeast generally astride 1st Division Road with two battalions abreast, 1st Battalion on the left, 2d Battalion on the right. Strong Aggressor delaying units have been encountered during the advance and they are expected to make a determined stand in the Davis Hill, Brown Ridge, Reynolds Hill area. (See Map.)

By 1400 hours today, 2 August, the 1st Battalion, 1st Infantry, had seized Bouton Hill and Ebbert Hill and was consolidating its positions, reorganizing, and preparing to continue the attack. At 1430 hours the regimental commander ordered the 1st and 2d Battalions to remain in their present positions and further stated the attack would be renewed at 0700 tomorrow.

Darkness—1945

Daylight—0630

2. *Initial situation.*

a. In his CP, at 1530 today, after receipt of the regimental attack order, Lieutenant Colonel 1st Battalion issued the following order to the company commanders and members of his staff. The platoon leaders of the 1st and 2d Platoons, Regimental Tank Company were present. The regimental

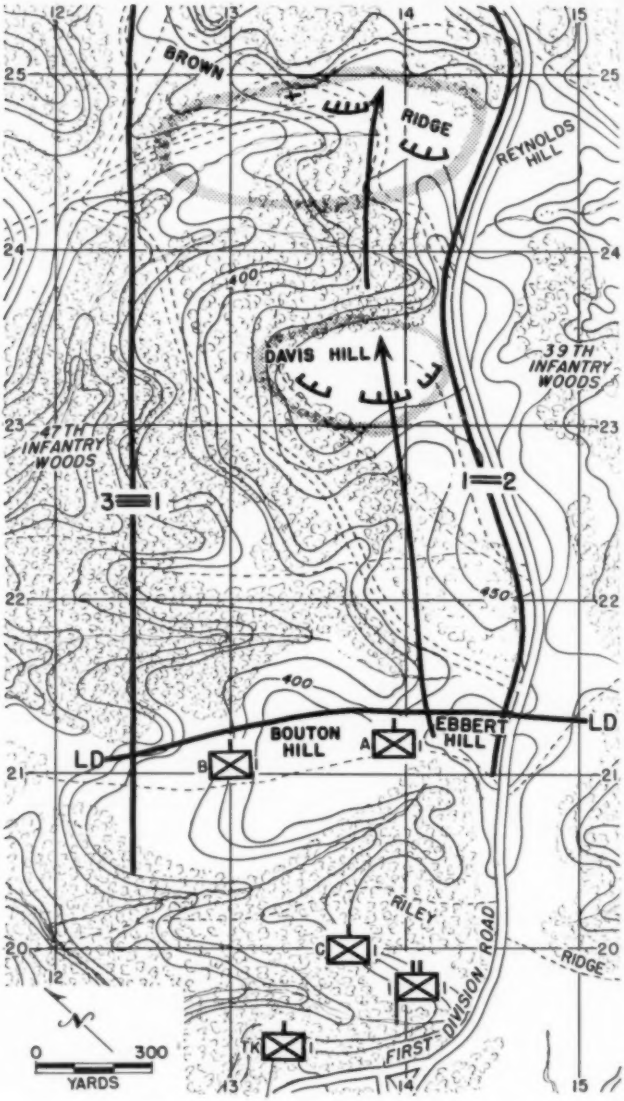

BROWN
RIDGE
REYNOLDS HILL
DAVIS HILL
39TH INFANTRY WOODS
47TH INFANTRY WOODS
BOUTON HILL
EBBERT HILL
LD
LD
RILEY
RIDGE
FIRST DIVISION ROAD
0 300
YARDS

Figure 1

tank company is in an assembly area at (13.1-18.7), southwest off the map.

"An estimated enemy battalion of infantry holds the Davis Hill, Brown Ridge, Reynolds Hill area. He is reinforced with tanks.

The 1st Infantry attacks at 0700 tomorrow to seize Davis Hill, Reynolds Hill, and Brown Ridge.

"The 2d Battalion, with the 3d Platoon, Regimental Tank Company attached, attacks on the right to seize the 39th Infantry Woods and Reynolds Hill.

"1st Field Artillery Battalion supports our attack from positions near Smyth Hill (13-18), off the map, south-west. It will place preparatory fires on Davis Hill (13-23) and Reynolds Hill (14-24) from H-15 until H-hour, and thereafter fire concentrations on call.

"Heavy Mortar Company is in general support of the regiment from positions southwest of Riley Ridge (14-19) and north of 1st Division Road. One heavy mortar forward observer operates in zone of Company A.

"This battalion with the 1st and 2d Platoons, Regimental Tank Company attached, attacks at 0700 hours tomorrow to seize Davis Hill and Brown Ridge. For zones of action, boundaries, LD, and objectives see map.

"Company A, with the 1st Platoon, Regimental Tank Company attached, attacks on the right on a frontage of 500 yards to seize that portion of Davis Hill in its zone and will be prepared to continue the attack to Brown Ridge on order.

"Company B, with 2d Platoon, Regimental Tank Company attached, attacks on the left on a frontage of 500 yards to seize that portion of Davis Hill in its zone and will be prepared to continue the attack to Brown Ridge on order.

"Company D:

"81-mm mortar platoon: support attack from positions in rear of Bouton Hill (13-21), with priority of fires to Company A.

"75-mm rifle platoon: 1st Section direct support of Company A with initial positions on Ebbert Hill; 2d Section direct support of Company B with initial positions on Bouton Hill.

"Machine-gun platoon: initially in general support from positions on Ebbert and Bouton Hills.

"Company C: in reserve in present position.

"Battalion CP remain in present location initially."

b. The battalion order was completed at 1555.

c. You are Captain Company A.

3. *First requirement.*

What will you do concerning the following:

a. With whom will you coordinate prior to leaving the battalion CP?

b. What is your next action?

c. Where will you issue your attack order?

d. What leaders will you have present to hear the attack order?

e. When will you issue the attack order?

4. *Solution to first requirement.*

a. You confer with Captain Company B, Captain Company D, Lieutenant 1st Tank Platoon, S-3 1st Battalion, and the representative of Heavy Mortar Company, 1st Infantry.

b. Your next action is to plan your reconnaissance, then decide when, where, and to whom you will issue the attack order. You let these people, whom you decide to have present, know where and when you will meet them to issue the order.

c. Your attack order will be issued in the vicinity of an observation post on Ebbert Hill that has good observation of the zone of action.

d. The rifle platoon leaders, weapons platoon leader, tank platoon leader, 75-mm rifle section leader, the artillery forward observer, and the 81-mm mortar and heavy mortar forward observers are present to hear the order.

e. You issue the attack order at 1745 hours to give the platoon leaders enough time for reconnaissance and for the issuance of their order before darkness.

5. *Discussion of solution to first requirement.*

a. The conference you conduct with each individual after the receipt of the battalion attack order is brief. Probably all you will accomplish at this time is to make arrangements for a later exchange of information, either through conferences or messages.

You make arrangements to meet Captain Company B at a later time to exchange information and plans of attack. Neither you nor he has had an opportunity to conduct a reconnaissance and complete your plans for the attack. From Captain Company D you learn the location of the heavy weapons elements in Company A's zone and the fire support plan. Arrangements are made with Captain Company D to meet the leader of the 1st Section, 75-mm Rifle Platoon. You arrange to meet the tank platoon leader at a later time to receive recommendations for the employment of the tank platoon, and for the movement of that unit to join Company A prior to the attack. You make arrangements with S-3, 1st Battalion, to meet the company commander of the left assault company of the 2d Battalion, to exchange plans.

From the representative of the heavy mortar company you learn the target areas and plans of fire support of the Heavy Mortar Company, 1st Infantry.

b. A vantage point with the best available observation is selected from which to issue the attack order. You then send a message to the company instructing the platoon leaders and supporting element leaders to meet you at the vantage point at 1745 hours to receive the attack order.

You then make your reconnaissance, complete your plan of attack, and prepare to issue your attack order.

c. An observation post on Ebbert Hill affords good observation of the zone of action. From it the leaders who receive the order can see the terrain and better understand the plan for the attack. With the key terrain features visible to the leaders hearing the order, there will be little opportunity for misunderstanding and each can readily visualize what is expected of his unit. The observation post must be sufficiently concealed to permit the assembly of the leaders.

d. If conditions permit, the first sergeant, communications noncommissioned officers, platoon sergeants, and section leaders of the weapons platoon also assemble to hear the order.

You orient the executive officer as soon as possible to bring him abreast of the situation. If maps of the zone of action are not available, sketches are issued to each person

present to receive the order. In this situation, there is enough time to assemble the leaders and issue the order. If time were limited and the leaders widely separated, you would issue your order in fragmentary form—either oral or written.

e. Darkness is at 1945 hours and you take roughly half the time available between the completion of the battalion attack order and darkness for your reconnaissance and the completion of your plan of attack. The time remaining before darkness after the issuance of the company attack order is for the platoon and other leaders to make their reconnaissance, complete their planning, and issue their orders. Since the attack is at 0700 hours tomorrow, the platoon leaders issue their orders in daylight today and allow enough time for their squad leaders to issue their orders before dark. Last minute preparations are completed between daylight tomorrow and the time of the attack. In this situation, there is previous knowledge of the terrain and enemy situation, hence your reconnaissance and plans for the attack can be completed in one hour and fifty minutes.

The time of issuing the attack order, 1745, may vary somewhat according to the mental processes and the reconnaissance and planning steps of the commander in estimating the situation.

6. *Second situation.*

a. On your reconnaissance you learned the following:

The enemy can cover the approaches along 1st Division Road with tanks.

The woods in the left portion of the company zone are moderately heavy and offer good concealment. The woods in the right portion of the company zone near 1st Division Road are thin and do not offer good concealment.

A patrol reports that the enemy is placing antitank mines just east of the trail running southeast-northwest between 1st Division Road and 47th Infantry Woods.

Enemy positions are shown on map.

7. *Second requirement.*

With the information available what decision do you make regarding the following?

a. Formation for the attack.

b. Plan for employment of the attached tank platoon.

c. Provisions for coordinating the effort of the attacking platoon(s)?

d. Plan for employment of the 60-mm mortar section?

e. Plan for employment of the 57-mm rifle section?

f. Your location during the attack?

g. When will you inform your platoon leaders, and leaders of attached and supporting elements, of your tentative plan of reorganization on the objective; and what does this plan include?

8. *Solution to second requirement.*

a. You employ the 1st and 2d Platoons in the assault, 1st Platoon on the right, with the 3d Platoon in support, or any combination of platoons that places two in the attacking echelon and one in support.

b. After receiving the tank platoon leader's recommendations you decide to have the tank platoon initially support by fire from positions on Ebbert Hill, then advance and join the 1st and 2d Platoons when they assault Davis Hill.

c. The attack of the assault platoons is coordinated by assigning each a definite frontage and a portion of the objective to capture.

d. The 60-mm mortars are employed in general support from a section position. One forward observer is with the 1st Platoon and one with the 2d Platoon.

e. One squad of the 57-mm rifle section is attached to each rifle platoon. The 57-mm rifle squad attached to the 3d Platoon initially occupies firing positions on Ebbert Hill to engage targets on Davis Hill.

f. Initially in the attack you occupy an observation post on Ebbert Hill to observe the progress of the assaulting platoons and to coordinate supporting fires.

g. When you issue your attack order, the platoon leaders, and leaders of the attached and supporting elements, are informed of your plan of reorganization on the objective. Included are the locations of the rifle platoons and supporting weapons on the objective, and plans for the artillery and mortar fires to cover possible enemy avenues of approach.

9. *Discussion of solution to second requirement.*

a. The formation used for the attack is governed by the mission of the company, width of the zone of action, reinforcements, supporting fires, terrain, knowledge of the enemy dispositions, and the need for security.

By using two platoons in the assault and one in support, Company A can deliver a strong initial attack yet retain a platoon to influence future action. Other factors influencing choice of this formation are: two platoons in the assault can cover a zone 500 yards wide; the terrain offers good approaches; and there are good supporting fires. Another factor to be considered, which favors the employment of not more than two platoons in the assault, is that there are two successive objectives to seize. This indicates an attack in depth. The 3d Platoon may be used to repel counterattacks, protect either flank, replace an exhausted part of the assault echelon, or strike a decisive blow to capture either Davis Hill or Brown Ridge.

The formation of one platoon in the assault and two in support is not used because such a formation does not give a strong initial attack. In addition, the zone of action is too wide for one platoon to cover adequately. This formation is often used when the company has a very narrow zone of action or is operating on an exposed flank, or when the enemy situation is obscure. Three platoons in the assault may be used when the zone of action is extremely broad, the information of the enemy is well known, and the objectives are limited.

b. You decide the tanks can render the most assistance to the assault platoons by initially supporting by fire from Ebbert Hill. When a route through the AT mine field has been prepared, the tanks advance rapidly from positions on Ebbert Hill, join the infantry, and assist in the assault on Davis Hill. This method of employment enables the tank platoon to provide accurate and timely fire support while the rifle platoons advance to the assault position. After joining the infantry at or near the assault position the tanks provide heavy fire support at close range. The shock action of the tanks also assists the rifle platoon. The tank platoon

assists in covering the reorganization of the rifle platoon on Davis Hill.

c. Your instructions coordinating the attack of the 1st and 2d Platoons are:

"1st Platoon attack on a frontage of 250 yards, seize that portion of Davis Hill in zone, and continue to Brown Ridge on my order.

"2d Platoon attack on a frontage of 200 yards, seize that portion of Davis Hill in zone, and continue to Brown Ridge on my order.

"Direction of attack 45°."

Each platoon is assigned a zone of action. This zone is indicated by assigning a frontage, definite terrain objectives, and a direction of attack. In the attack, the rifle platoon is seldom assigned boundaries; thus advantage can be taken of the cover and concealment in an adjacent platoon zone, providing proper coordination is made. The frontage assigned a rifle platoon is normally from 100 to 250 yards. For a rifle company in the attack the frontage is normally from 200 to 500 yards.

d. The initial position area for the 60-mm mortars is in the draw in rear of Bouton and Ebbert Hills. This position enables the mortars to deliver fire anywhere in the company zone of action.

The mortars are used in general support to provide flexibility of fires, ease of control, and simplicity of supply. When in general support all the fires of the section can be concentrated more readily on a single target in the company zone of action.

The forward observers are equipped with the SCR-536 radio and can readily and rapidly request and adjust the 60-mm mortar fire to give timely and adequate support for the assault rifle platoons. They advance with the rifle platoons and enable the platoon leaders to request and receive immediately desired 60-mm mortar support.

e. Taking into account the section of 75-mm rifles in direct support of your company, you attach a 57-mm rifle squad to each rifle platoon to simplify control of the supporting weapons. This allows the rifle platoon leaders to have a

direct fire weapon under their control for destruction of targets holding up the advance of the leading elements. The 57-mm rifle is capable of providing close support for the rifle platoons and assisting their advance by engaging enemy crew-served weapons, groups of personnel, and pillbox embrasures.

f. When the attack is launched you assist the advance of the rifle platoons by coordinating supporting fires. You can best do this by observing the progress of the platoons from an observation post that will give you a clear view of the attack and from which you can readily contact forward observers to request their fire. When the 1st and 2d Platoons advance beyond your observation, you move forward and join the right platoon to facilitate your observation and control, and you assist both assault platoons by calling for heavy fire support. Under protection of the supporting fires you push the attack rapidly to save time and casualties.

g. Reorganization plans for Davis Hill and Brown Ridge are made from a map study and may be adjusted slightly to conform to the terrain after you seize the objective. The company reorganizes rapidly on the objective. All units consolidate their positions and prepare for the continuation of the attack. If all subordinate leaders know the plan of reorganization before the attack, confusion and loss of time during reorganization are minimized.

10. *Third situation.*

The 1st and 2d Platoons, 1st Platoon on the right and the 3d Platoon in support, crossed the line of departure at 0700, 3 August, and advanced rapidly, meeting only slight initial resistance. However, at 0715 you receive the following message from the 1st Platoon, "Am near the edge of the woods at (14.3-22.4) and receiving heavy machine gun fire from open emplacement at (14.0-23.4). Cannot get the 57-mm rifle into position to engage target. Unable to advance."

A few minutes later the following message is received from the 2d Platoon, "Have reached the trail at (13.9-22.7) and am receiving heavy mortar fire. Casualties very heavy."

11. *Third requirement.*

a. What are your instructions to the 1st Platoon?

b. What are your instructions to the 2d Platoon?

c. What action do you take to assist the 2d Platoon?

12. *Solution to third requirement.*

a. You instruct the 1st Platoon leader to have his 60-mm mortar forward observer adjust fire on the enemy machine gun. Remind him that this observer has been with him all the time and that he has wasted time by not using the observer immediately.

b. The 2d Platoon is instructed to push the attack aggressively and close with the enemy.

c. You request the artillery and heavy mortar forward observers to locate the enemy weapons firing on the 2d Platoon and destroy them.

13. *Discussion of solution to third requirement.*

a. From all indications, the 1st Platoon leader has not made maximum use of his supporting fires. The 60-mm forward observers are with the rifle platoons to assist them by destroying targets of this type that are preventing the advance of the leading elements. The forward observer method of adjustment enables targets to be engaged rapidly and destroyed.

b. The best thing to do is advance rapidly and close with the enemy so he cannot fire on the attacking troops without hitting his own men. No advantage is gained by the 2d Platoon remaining in its present position as the casualties may be greater if the platoon halts than if the attack is pushed aggressively.

c. The artillery and heavy mortars can effectively engage targets in defilade. The artillery liaison plane is available to assist the forward artillery observer in locating enemy weapons in defilade. Your effective and timely employment of supporting fires helps the advance of the rifle platoons.

14. *Fourth situation.*

a. The 1st and 2d Platoons are advancing slowly against determined resistance. The 1st Platoon is now at (14.4-22.7) and has had several casualties. The 2d Platoon is advancing slowly through the wooded area and has now reached (13.6-22.9).

Lieutenant Colonel 1st Battalion has informed you that Company B on the left has advanced slowly and is now at the stream at (12.7-21.8).

The 2d Battalion is abreast of Company A and reports it is receiving heavy machine gun fire from an enemy machine gun on Davis Hill 100 yards north of 1st Division Road at (14.2-23.3).

The 1st Platoon leader reports he hears enemy armor movement to the front near 1st Division Road.

The 3d Platoon is in the initial location at (13.9-20.8).

The 2d Platoon reports it has lost contact with Company B.

15. *Fourth requirement.*

a. Do you employ the 3d Platoon at this time?

b. What measures do you take to protect your left flank?

c. What action do you take to regain contact with Company B?

d. What action do you take about the report of enemy armor moving along 1st Division Road?

e. Do you take any action to destroy the enemy machine gun that is firing on the 2d Battalion from Davis Hill?

16. *Solution to fourth requirement.*

a. You do not employ the 3d Platoon at this time.

b. You order the 3d Platoon to move to a position in the woods at (13.8-21.8) with the mission of protecting the left flank.

c. The 3d Platoon is ordered to send a patrol to regain contact with Company B.

d. You immediately inform the tank platoon leader and the 75-mm rifle section leader to be alert for enemy armor along 1st Division Road, and inform the battalion commander of the presence of enemy armor.

e. Check the 81-mm forward observer to see if he has received orders from battalion to locate and destroy the enemy machine gun. See that he does so.

17. *Discussion of solution to fourth requirement.*

a. Both the 1st and 2d Platoons are still advancing, with the 2d Platoon nearing its objective. There is not a definite need to employ the 3d Platoon at this time. From all indi-

cations the 2d Platoon should begin the assault on Davis Hill before long and by that action assist the advance of the 1st Platoon. If one, or both, of the assault platoons' forward advance had been stopped, you could have employed the 3d Platoon from a new direction to attack in conjunction with a renewed effort by the 1st and 2d Platoons.

b. An open flank on the left has been created by the slow advance of Company B and you must take immediate steps to protect it. The 3d Platoon can provide adequate protection for the flank. The 2d Platoon cannot adequately protect the left flank in this situation and continue its mission.

The battalion commander can be requested to protect the open left flank with the reserve rifle company or the fires from supporting weapons. To assist the 3d Platoon in protecting the flank, the weapons platoon leader is instructed to plan fires of the 60-mm mortar section for this mission.

c. Immediate action is taken to regain contact with units on the flank. A patrol can perform this task. Either the 2d or 3d Platoon *could* provide the patrol, but this action would overburden the 2d Platoon. Therefore, the 3d Platoon is used for this mission.

d. The tank platoon and 75-mm rifle section provide protection against enemy armor. Information of the enemy armor is given to these units immediately. The 2d Platoon, the forward observers of the artillery and mortars, and the battalion commander are informed of the 1st Platoon's report.

e. All possible assistance, without materially decreasing your ability to perform the assigned mission, should be given to adjacent units. Undoubtedly the battalion commander will have directed that action be taken to eliminate the machine gun. Since the advance of the 2d Battalion will assist your company, if the 81-mm mortars are not already firing this mission, you request them to do so to enable your 60-mm mortars to continue firing in support of the assault platoons.

If the 81-mm mortars cannot fire the mission, the Heavy Mortar Company, artillery, or tanks may be requested to destroy the enemy weapons.

18. *Fifth situation.*

a. By 1130 hours the 1st and 2d Platoons have seized their objectives and the battalion commander has been informed of this fact and the status of the companies. At that time you receive the following mesage from Lieutenant Colonel 1st Battalion, "Companies A and B continue the attack at 1200 hours to seize Brown Ridge."

The 60-mm mortar section is in the initial firing position. The tank platoon and 75-mm rifle section are on Davis Hill. The 1st Platoon has received five casualties and the 2d Platoon, due to the heavy mortar fire it encountered, has received thirteen casualties, two of whom are squad leaders. The 3d Platoon is in a position in the woods at (13.9-22.7).

19. *Fifth requirement.*

a. Which rifle platoons do you plan to employ in the assault for the attack to Brown Ridge?

b. When do you order the 60-mm mortar section to displace and what position area do you select for it?

20. *Solution to fifth requirement.*

a. You plan to employ the 1st and 3d Platoons in the assault for the attack to Brown Ridge.

b. The 60-mm mortars are ordered to displace immediately by section to a position in rear of Davis Hill at (14.1-23.1).

21. *Discussion of solution to fifth requirement.*

a. The 2d Platoon has received heavy casualties during the attack to Davis Hill. To give the 2d Platoon an opportunity to reorganize and prepare for future action, you place it in support. Since the 3d Platoon has not been in the assault, you constitute a strong, hard-hitting force with the 1st and 3d Platoons in the assault. The 3d Platoon is fresher and can supply new initiative and force to the attack.

b. You want all the fire support possible for the attack to Brown Ridge, so it is necessary for the 60-mm mortar section to displace to support the assault platoons to the objective. Displacing by section, the 60-mm mortars can complete the move in a minimum of time and provide maximum initial support from the new position. The mortars and ammunition are carried on the weapons carrier, enabl-

ing the personnel to move rapidly without the handicap of heavy loads. Only a limited supply of 60-mm mortar ammunition can be hand-carried by men of the section, but the weapons carrier transports enough ammunition for a sufficient supply at the new position.

Displacement by squad may be necessary in some situations to provide continuous mortar suport, but normally the 81-mm and heavy mortars can provide enough mortar support during the displacement of the 60-mm mortar section.

22. *Sixth situation.*

a. By 1530 the 1st and 3d Platoons were preparing to assault Brown Ridge. At 1540 the supporting fires lifted and the assault was launched. The enemy resistance consisted of isolated automatic weapons and small groups of riflemen. The tank platoon had advanced and joined the rifle platoons for the assault on Brown Ridge.

At 1555 the platoons seized their objectives.

23. *Sixth requirement.*

a. What instructions do you give the 81-mm mortar, heavy mortar, and artillery forward observers?

b. What instructions do you give to the 1st and 3d Rifle Platoon Leaders at this time?

24. *Solution to sixth requirement.*

a. You check to see that the forward observers of the 81-mm mortars, heavy mortars, and artillery occupy observation posts on Brown Ridge and plan and register concentrations covering enemy approaches to Brown Ridge.

b. You give the following instructions to the 1st and 3d Rifle Platoon Leaders.

"1st Platoon: take a position on Brown Ridge on a frontage of 200 yards with your right flank on 1st Division Road. Reorganize and be alert for an enemy counterattack along 1st Division Road.

"3d Platoon: take a position on Brown Ridge on a frontage of 200 yards on the left of the 1st Platoon. Reorganize and be alert for an enemy counterattack from the woods to your left front.

25. *Discussion of solution to sixth requirement.*

a. The 81-mm mortar, heavy mortar, and artillery fires provide protection for Company A during reorganization. These fires may be planned before arrival on the objective, but their location is verified at the earliest practicable time after seizing the objective.

Platoon leaders are informed of the numbers and location of the concentrations to enable them to request fire support rapidly.

b. When you issued your attack order, you informed all platoon leaders of the tentative plan of reorganization on the objective. All that is required now is a brief order giving the information necessary to enable the platoon leaders to select positions and coordinate with adjacent units. As the time and situation allow, the reorganization includes the replacement of key leaders who have been casualties, restoring communication that may have been interrupted, evacuating wounded, replenishing ammunition, and preparing for future action.

It is important that all units reorganize rapidly upon seizing the objective in preparation for the expected enemy counterattack. A rapid and proper reorganization is an integral part of the attack and must be conducted with the same vigor and determination as the attack. To be successful in the attack you must take the necessary action to hold the ground gained.

Use of Heavy Weapons Company Communication and Transportation In Attack

Compiled by Major Emil V. B. Edmond, Infantry

Dear Sam:

Help! The Old Man has got the idea that I'm a heavy weapons man just because I commanded that high-point Company H on the way back to the States after the late unpleasantness. I just heard him tell the adjutant to write out the order putting me in command of Company M—me, an old rifleman from way back! But you haven't heard the worst yet, Sam. I've got to give a lecture next week on communication and transportation in the heavy weapons company, and what I know about this you could put in your eye. Sure, I know I could probably dig it out of the manuals, but I'm on two boards, a court, and am inventorying the P.X in my spare time—and Jane is about to present me with an heir. I know you've been teaching the stuff at Benning and have got all the latest dope. So how about sending me some hot-off-the-griddle information and I'll name the boy Samuel in your honor. Time is of the essence!

Hopefully,
Tom

Dear Tom:

Here is the information you asked for—the same dope we give to the classes at The Infantry School. I'll give you a little background first, and then talk about communication and transportation. I am inclosing some illustrations so that you can look as well as read.

To begin with, Tom, those eight machine guns, four 81-mm mortars, and four 75-mm rifles in your company can

throw a lot of lead—fire power that supports those riflemen up front and keeps them moving. When all those weapons fire at their sustained rate, about 740 rounds of machine gun ammunition hit the enemy every minute, plus 48 rounds of mortar and 75-mm. That is, they hit the enemy if your outfit works the way it is supposed to. You can actually put out an even greater volume of fire for short periods.

All this gives you an idea of what the company can do in the way of fire power, but it is not quite as simple as that. You need good communication and transportation to help achieve this firepower. So I'll start off with communication first and wind up with transportation.

In combat, you need good communication with the elements of your company. To support the assault rifle units, the characteristics of the different weapons require them to be placed throughout the width and depth of the battalion zone. Communication people and equipment help you control these dispersed elements. Down at the platoons, the platoon leaders use communication also, because they disperse their weapons so that one enemy shell won't destroy everything they've got while they are supporting the riflemen.

When our infantry first entered combat in the last war, the heavy weapons company had some CE-11 telephone sets and a few short range radios. Later, the mortar platoon got a few FM radios (SCR 300) for fire control. Communication facilities in the infantry as a whole were improved by the end of the war, but the heavy weapons company still had limited equipment for communication from company to platoons, and for controlling supporting fires within the platoons.

After the war, the infantry made a study of the various ways in which the heavy weapons company had been used, and based on this study they increased the communication equipment and personnel of the company. As a result, the company now has the equipment and men you need to control your platoons, and the platoon and section leaders have what they need to control their fires, regardless of tactical dispersion.

Here is the communication equipment you will now find in the company: nine SCR 300 radios, three SCR 536 radios, eight CE-11 reel equipment sets, sixteen DR-8 spools, eleven EE-8 telephones, ten miles of WD-1 wire, two SB-18 emergency switchboards, and seven AP-50 panel sets.

The *SCR-300* is an FM voice radio with a range of three miles. It works on a line of sight principle, so intervening terrain features interfere with its effectiveness. This isn't much of a problem, though, because in most cases you use this radio at short ranges. It weighs from 32 to 38 pounds, depending on the type of battery used, and one man can carry it. The company headquarters has three of these, each platoon has one in your command net, and the mortar platoon uses the remaining three for fire control. (See Figure 1.)

Figure 1. SCR-300 Radio.

The *SCR-536* is an AM voice radio with a range of about one mile. It is a very good means for communicating at short distances. It weighs only 5.5 pounds and you can carry it easily, either in the hand or slung over the shoulder. The leader of the 75-mm rifle platoon uses the three 536 radios for fire control. Radio technicians have already improved the 536, and it will probably be replaced soon with the improved version. (See Figure 2.)

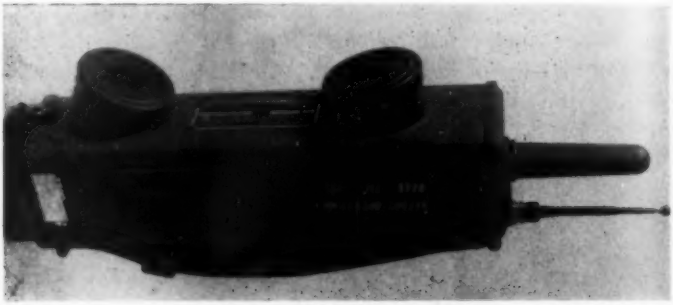


Figure 2. SCR-536 Radio.

The *CE-11 telephone set* with the DR-8 spool and WD-1 wire is a lightweight means of sending voice messages. You can talk for a distance of from six to ten miles; however, only rarely will you have to use it for a distance greater

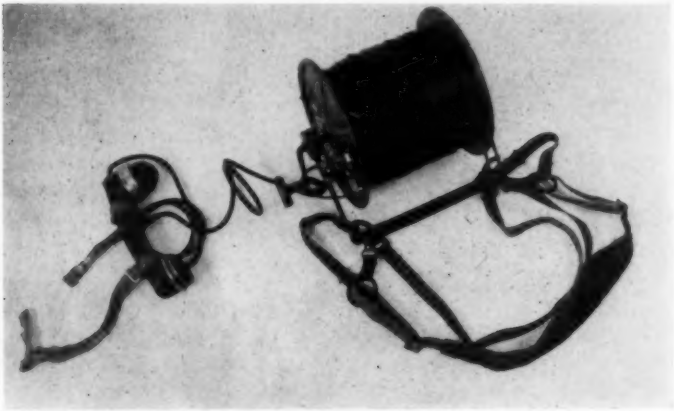


Figure 3. CE-11 Telephone Set with DR-8 Reel.

than 500 yards. One man can lay a wire line with this equipment. The machine gun platoon has three of these telephone units and five are in the 75-mm rifle platoon.

The 10 miles of WD-1 wire, which the company has, comes originally in wire dispensers holding one-half mile of wire per dispenser. While laying wire from a dispenser you can have continuous communication while laying it. Since the wire cannot be put back into the dispensers, the empty spools DR-8 are carried to recover the wire for reuse. (See Figure 3.)

The *EE-8 telephone* is a local or common battery telephone which permits voice conversations for a distance of eleven to seventeen miles. It weighs about ten pounds and is easily transported, installed, and operated by one man. You have two EE-8 telephones in the company headquarters, one in both the machine gun and 75-mm rifle platoons, and seven in the mortar platoon. These telephones let your communication people maintain a wire net parallel to the SCR-300 radio net.

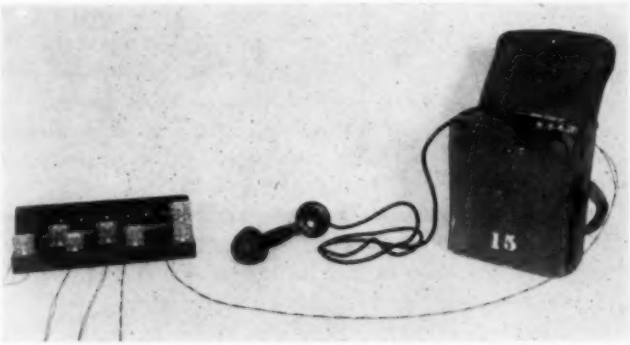


Figure 4. EE-8 Telephone and SB-18 Switchboard.

The *SB-18 emergency switchboard* is a six-drop board which weighs 2¼ pounds. It is easy to transport and install, and you don't need much time to train an operator. One switchboard is used at the company command post and one at the mortar platoon fire direction center. The EE-8 telephones are connected to the switchboards, so you can have party calls as well as private calls. (See Figure 4.)

In addition to this electrical equipment, your company has the *panel set AP-50* which is a lightweight, portable panel used mostly for ground identification and air-ground communication.

The last item on the communication equipment list is the *pyrotechnics.* They are fired from the M1 Rifle and carbine with M7 and M8 grenade launchers. These pyrotechnics are used for emergency communication.

Now for the communication *personnel.* These are your communication sergeant, bugler, nine radiotelephone operators, nine messengers, and two orderlies. It is your responsibility that these people get thorough training on all phases of the company communication system—in other words, so that a messenger or orderly can also operate the radio or install wire.

The *communication NCO* supervises the installation, operation, and maintenance of all company communication equipment. He is directly responsible to you for the training of men assigned to communication duties. During combat, he establishes and maintains both radio and wire communication from your command post to the platoons, the company observation post, and the battalion command post.

The *bugler* assists the communication NCO. He may be required to operate the switchboard, act as a radio-telephone operator, or perform any other duties expected of communication personnel.

Your company has one radiotelephone operator for each of the nine SCR-300's. Their main duty is to operate and maintain these radios in the battalion and company command nets and in the mortar fire control net.

Of the nine *messengers,* four are in company headquarters, the machine gun and mortar platoons have two each, and one is in the 75-mm rifle platoon. They carry oral and written messages and may serve as alternate radiotelephone operators or wiremen.

The two *orderlies* are trained primarily as messengers and observers, and assist you in observation and control. In addition they are trained as radiotelephone operators and wiremen.

Up to this point you have the information on the amount of communication equipment and personnel in the company. Now you want to know how these people and equipment are used. Although each tactical situation may be a different control problem, you need a certain amount of standardization in the employment of this equipment and these people to give you essential communication.

Two of the SCR-300 radios in company headquarters are normally used at your command post. One is tuned to the battalion command channel so that you can have direct radio communication to battalion headquarters and the rifle companies. The other 300 is in the company command net, which also has a 300 radio with each of your platoons. (See Figure 5.)

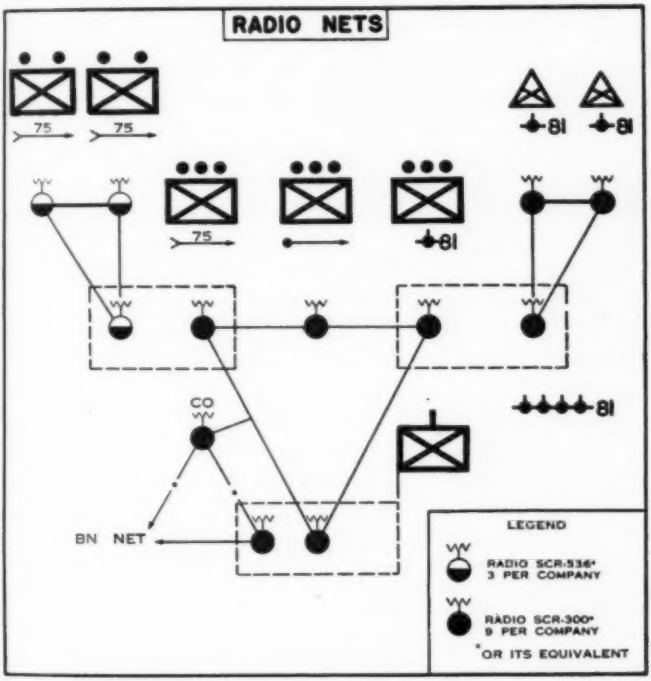


Figure 5. Heavy Weapons Company Radio Nets.

The third SCR-300 in company headquarters is *your* radio. It is set on either the company or battalion command channel, depending on your location. If you are with the battalion commander, your radio should be on the company command channel; when you leave the vicinity of the battalion commander your radiotelephone operator should switch to the battalion command channel. If your radio is on the battalion command channel and you desire to communicate with one of your platoons, you may have the message relayed through the SCR-300 radios at your command post, or have your radio temporarily switched to the company command channel. In this way you can communicate with your platoons as well as with battalion, regardless of your location. However, the net control station must be notified each time your radio is checked in or out of a net.

The SB-18 switchboard in company headquarters should be at your command post. One EE-8 telephone is used by the operator of this switchboard. The second EE-8 telephone is on a separate line from the switchboard and is used by command post personnel. One wire line is maintained by battalion from the battalion command post to this switchboard. You should have your communication people run one wire line from the company switchboard to each of your three platoons. This wire net, which is possible in static or slow-moving situations, provides a means of communication parallel to the SCR-300 radio net. (See Figure 6.)

You use your messengers in company headquarters to deliver written or oral messages which cannot be sent by radio or wire. They work under the control of the communication sergeant and carry messages to your platoons as well as the battalion command post and other installations of the battalion.

The *machine gun platoon* has one SCR-300 radio which is in the company command net. It does not have any radios for communication within the platoon. However, The Infantry School has recommended that portable radios (SCR-

536, or a substitute), which can be used for communication from the platoon leader to his sections, be allotted.

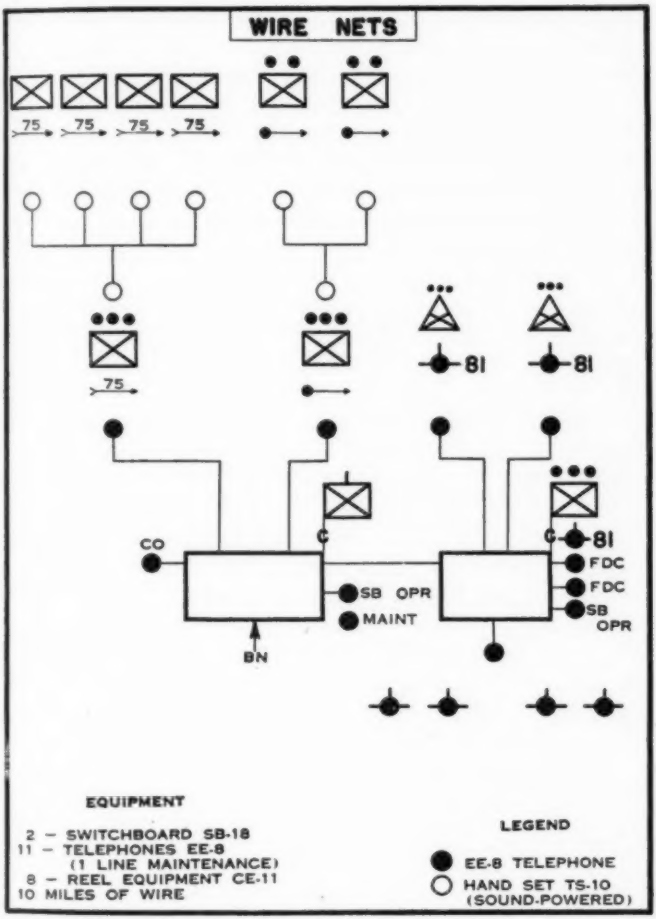


Figure 6. Heavy Weapons Company Wire Nets.

The three CE-11 telephone sets in this platoon permit wire communication from the platoon leader to his section leaders. Communication from the section leaders to the gun squads is by voice and arm and hand signals. The one EE-8 telephone is used by the platoon for communication in your company wire net.

One of the two platoon messengers usually accompanies one platoon leader, while the other messenger reports to the communication sergeant at your command post. They carry messages between the command post and platoon, or as required by the platoon leader. When either the company or platoon command post is displaced they should exchange information so that both of them know the locations of both command posts.

The *75-mm rifle platoon* has one 300 radio which is in the company command net. It also has three 536 radios for intraplatoon communication—one with each section leader and one with the platoon leader. This permits communication between these leaders in situations where wire communication is not possible. The platoon does not have personnel assigned to operate the 536 radios as they are easily carried and operated by the leaders who use them.

The five CE-11 telephone sets make possible direct wire communication from the platoon leader to each of his gun crews. They are a rapid means of transmitting fire orders. Platoon headquarters has one, and two are in each section. Section leaders control the fires of their gun crews by voice and arm and hand signals. The EE-8 telephone in the platoon is on a line to the switchboard at your command post.

As there is only one messenger in the 75-mm platoon, he ordinarily accompanies the platoon leader and delivers all messages ordered by him. The Infantry School has recommended that an additional messenger be put in the platoon so that there will be a dual messenger arrangement like that in the machine gun and mortar platoons.

Your *mortar platoon* has four SCR-300 radios—one in the company command net and three in a separate net for fire control within the platoon. You have direct radio communication to this platoon through its radio in the com-

pany command net. The forward observers* use two of the fire control radios and one remains at the platoon fire direction center. These sets enable the observers, who operate well forward with the rifle companies, to call for and adjust supporting fires of the platoon. Having a separate net for fire control prevents your command channels from becoming tied up by fire orders, or vice versa. Using the same type radio for fire control in your mortar platoon and for command in the battalion enables a rifle company commander to obtain mortar fire support, when an observer from the platoon is not available, by switching his set to the mortar fire control channel.

There is a shortage of SCR-300 radios in your mortar platoon. As two fire control radios are with forward observers, only one is available at the platoon firing position area to receive fire requests. However, as displacements are normally made by section, there must be one radio which remains in operation at the old firing position and one which the displacing section can take forward. To overcome this present shortage, the SCR-300 in the company command net is switched to the platoon fire control channel during displacement. This method is not completely satisfactory as it requires the mortar platoon to be temporarily out of your command net. The Infantry School has recommended that an additional SCR-300 radio be added in the platoon to give continuous communication on the fire control channel during displacement, so that this platoon won't be left out of the company command net.

The seven EE-8 telephones in the mortar platoon provide a wire communication net parallel to the radio net. Each of the two forward observers has one, the platoon firing position has one, the fire direction center has two, and the operator of the platoon SB-18 switchboard has one. This switchboard is located near the fire direction center. Lines are laid from it to the forward observers, firing position, fire direction center, and the SB-18 switchboard at

*Since the Table of Organization for the Heavy Weapons Company authorizes no forward observers, The Infantry School recommends using the mortar platoon section leaders as the platoon's observers.

your command post. The seventh EE-8 telephone in the platoon is a utility set for the company. The platoon wire net is established and maintained in all static situations, and when the situation does not require much moving.

The two messengers in the mortar platoon are used the same way as those in the machine gun platoon.

Now for control during the attack. Your heavy weapons company has, with the few exceptions noted, the communication personnel and equipment which enable your leaders to have close control over the supporting fires of their elements. Targets of opportunity can be rapidly engaged. When you employ the elements of your company in general support, their fires can be equally distributed across the battalion zone of action or massed against a target in support of a single rifle unit. This flexibility is possible through communication personnel and equipment which permits close control, in spite of the distance between elements of the company in a tactical situation.

Visualize a situation in which your platoons are all in general support of the battalion attack. Initially you have ordered their fires distributed across the battalion zone in support of both assault rifle companies. However, as the attack progresses, one of the rifle companies encounters an enemy position which materially retards its advance. You order your platoons to mass their fires against this enemy position. The platoons receive the order and mass their supporting fires on this target to assist that rifle company to move forward. Likewise, you may order the fires of your entire company to be shifted and massed against a target in support of the other assault rifle company. When these areas are overcome and the attack continues, your weapons engage targets of opportunity as they appear. This rapid shifting of massed fires and engaging of targets of opportunity is possible only with good communication equipment and personnel.

The communication nets are also of great assistance to you for transmitting other tactical orders to your platoons. You may issue orders for displacement, thus facilitating its timely execution. You must have good communication in

your heavy weapons company if you expect to accomplish your mission of continuous close support of the assault rifle companies.

This gives you the communication picture. Now lets look at the *transportation*. Vehicles are just as essential for tactical employment of your heavy weapons company as are communication personnel and equipment. The weight of the crew-served weapons and ammunition makes it impossible for your men to move any great distance or to maintain a volume of fire without the use of their vehicles. In the company you have vehicles for reconnaissance and for transporting weapons, ammunition, and maintenance equipment, as well as other company and individual property.

The company has a total of thirteen ¼-ton trucks, three ¾-ton trucks, and one 2½-ton truck. The carrying capacity of these vehicles is augmented by eight ¼-ton trailers and three 1-ton trailers.

The 2½-ton truck, which tows a 1-ton trailer, is in the company headquarters. In addition, the company headquarters has two ¼-ton trucks and one ¾-ton truck. Both your machine gun and mortar platoons each have five ¼-ton trucks and four ¼-ton trailers. The 75-mm rifle platoon has two ¾-ton trucks, one ¼-ton truck, and two 1-ton trailers.

You have twenty-two men in your company to control, operate, and maintain this transportation. This is their primary duty. Included in this group are the motor sergeant and two mechanics in your company headquarters, the transportation corporals in the machine gun and mortar platoons, and seventeen drivers.

Your *motor sergeant* supervises the operation and organizational maintenance of all company vehicles. He is directly responsible to you that vehicles are kept in good operating condition. He is assisted by the company mechanics and platoon transportation corporals.

Mechanics perform organizational maintenance on company vehicles and assist the drivers, when necessary, in their driver maintenance. When properly trained they can make emergency repairs to keep vehicles in operation during combat.

You have a *transportation corporal* in both the machine gun and mortar platoons to assist the platoon leaders in supervising the operation and driver maintenance of platoon transportation. During combat their primary duty is the control of platoon vehicles used in resupplying ammunition. The 75-mm rifle platoon does not have a transportation corporal.

Each of the drivers performs driver maintenance on his own vehicle. These drivers are trained to keep their vehicles ready to operate at all times. In combat, they conceal and camouflage their vehicles at all halts.

Now for the *employment* of the vehicles in general, the vehicles in your company derive their names from their usage. The 2½-ton truck is called a general utility vehicle. The ¼-ton trucks in company and platoon headquarters are called command and reconnaissance (C & R) trucks, the ¾-ton in company headquarters is called a maintenance truck, and the ¾-ton and ¼-ton trucks in the squads and sections are called weapons carriers.

The *2½-ton utility vehicle* with a 1-ton trailer transports individual and squad rolls for company personnel. As its name implies, it also transports essential items of equipment which cannot be carried on other company vehicles.

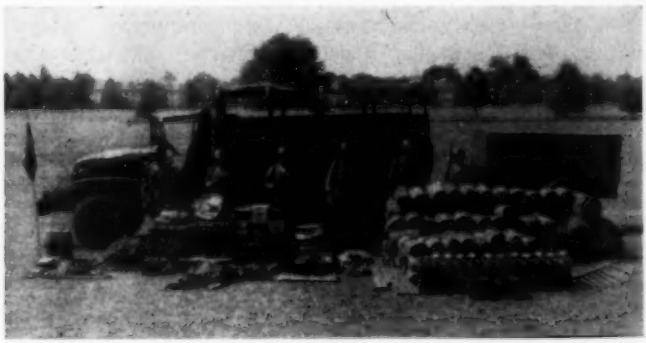


Figure 7. 2½-ton Utility Vehicle with 1-ton Trailer.

You normally keep this vehicle in the rear area. (See Figure 7.) The individual rolls are carried in the utility vehicle's 1-ton trailer. When they are issued to the men the

trailer is moved forward by the kitchen truck when it hauls meals to the troops.

The *¾-ton truck* in company headquarters transports your company mechanics and maintenance equipment. The maintenance equipment includes the two general mechanics' tool sets and the second echelon set No. 1. During combat, you should locate this vehicle and the mechanics in a covered area in the rear so that minor repairs can be made on company vehicles. Its exact location depends on whether the mechanics are under your control, or are grouped at battalion or the regimental field train bivouac. (See Figure 8.)

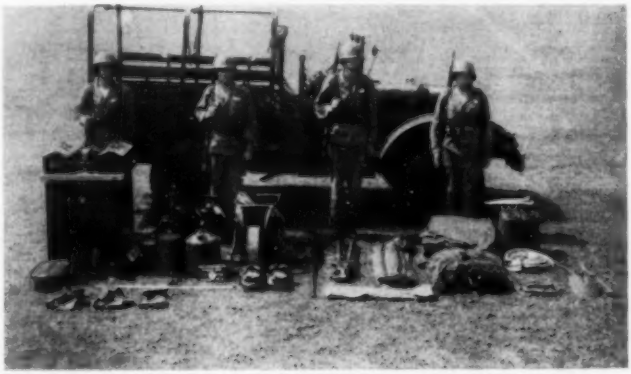


Figure 8. ¾-ton Maintenance Truck.

You and your leaders use the *command and reconnaissance vehicles* to help you get your work done during combat. When the tactical situation is such that you can use these vehicles, you will find them of assistance in expediting your reconnaissance as well as for the transmission of messages. (See Figure 9.)

The remainder of the vehicles in your company, both ¼-ton and ¾-ton trucks, are *weapons carriers*. Each squad of your machine gun and mortar platoons and each section of your 75-mm rifle platoon has one weapons carrier to transport the crew-served weapons, basic load of ammunition, and other squad or section equipment. The ¾-ton trucks are in the 75-mm rifle sections because of their

Figure 9. ¼-ton Command and Reconnaissance Truck.

greater carrying capacity. The size and weight of the 75-mm rifle and its ammunition are too great for ¼-ton vehicles. Drivers of all weapons carriers are members of the squad or section to which their vehicle is assigned. (See Figures 10 and 11.)

Figure 10. ¼-ton Weapons Carrier with ¼-ton Trailer.

In combat, your platoons use their weapons carriers to resupply ammunition and transport crew-served weapons with skeleton crews during displacments. A squad or section weapons carrier may obtain ammunition for the entire platoon as well as for its own squad or section. During displacement, however, a carrier normally transports only the equipment of the squad or section to which it is assigned.

Figure 11. ¾-ton Weapons Carrier with 1-ton Trailer.

The terrain and the effectiveness of enemy fire influence the extent to which you can use your carriers. You and your leaders must carefully consider these factors when deciding the extent to which carriers can be employed. At times it may be necessary to take a calculated risk in the use of carriers to keep an adequate supply of ammunition at the gun positions or to execute timely displacements.

In attack, you normally release the weapons carriers to the control of your platoon leaders and each platoon takes care of its own ammunition resupply. However, you should order the platoon leaders to keep the company command post informed of the ammunition status in each platoon. Platoon transportation corporals control the movement of weapons carriers engaged in the resupply of ammunition.

It is your responsibility that displacements are accomplished with minimum loss of time so that the company can provide continuous close suport of the rifle companies. If your leaders aggressively use their carriers for displacement, their displacing element is able to move more rapidly and arrive at the new firing position area with a greater amount of ammunition. While on reconnaissance, you and

your leaders select vehicle routes for use during displacement. The weapons carriers, loaded with guns, ammunition, and skeleton crews, move along these routes while the remaining personnel of the displacing element move on foot along the shortest covered route.

The heavy weapons company accomplishes its mission of continuous close support to the rifle companies through constant reconnaissance, close control of its supporting fires, maintenance of an adequate supply at the gun positions, and timely displacements. You will have the necessary control if you properly use your communication equipment and personnel. Aggressive employment of your weapons carriers will greatly aid you and your leaders in accomplishing the other essential prerequisites of successful employment of the company — reconnaissance, ammunition supply, and timely displacements.

Well, Tom, I think this will help you out for that lecture on communication and transportation in the heavy weapons company, and also give you a good start in the actual command of your company.

Sincerely,
Sam

Dear Sam:

Thanks for that fine information you sent me. The lecture was a big success. But here's some bad news, Sam. I can't name the boy after you because it was a girl, and I don't think *Samuela* would be a good name for a girl, do you?

Regards,
Tom

The Enlisted Efficiency Report

Compiled by Major Ernest C. Englehardt, Infantry

Remember the days when a man who made private first class on his first hitch was considered a handshaker?

And remember the days during the last war when it was not unusual to find a master sergeant with total service of one year or less?

As the old timers know, in pre-war days the noncommissioned officer grades were few and far between; the tables of organization were not fat with stripes as they are today. It was common to see even top-notch soldiers with one chevron, or at the most two. The problem of promotion was difficult, for when a vacancy did occur there were always many highly qualified men to fill it. And the real heart of the problem was the selection of the best from a large number of superior eligibles—a selection usually based, in the case of infantrymen, on length of service.

In World War II the promotion problem was in some respects even more difficult. For to fill a large number of noncommissioned officer vacancies we had to select the best men from a tremendous group—the citizen army—and these men had comparatively little experience.

Yet in both these extremes—pre-war and war time—the noncommissioned officers, as a group, enjoyed a reputation as the "backbone of the army"—reputation justly earned through honorable, faithful, and efficient service.

Today, with the advent of the Career Guidance Plan for warrant officers and enlisted men, our system for advance-

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EDITOR'S NOTE: Since this article went to press, the Department of the Army has issued a directive, pending revision of paragraph 5, AR 600-180, which will affect submission of the Enlisted Efficiency Report. It is believed however, that the overall purpose of the Report remains unchanged.

ment of the enlisted man is much more complex than the old "recommendation of his immediate commanding officer." Bearing in mind the basic scope of the Career Guidance Plan—to make possible the orderly advancement of qualified enlisted personnel to positions of responsibility—the plan provides for grade advancement through competition. To make this competition army-wide in scope, career fields and MOS ladders have been established, within which, for the most part, advancement transcends the company and regimental levels. Thus within the higher grades the selection of noncommissioned officers is not limited to individual organization vacancies, but is on the basis of vacancies within the Army.

This system obviously favors the highly qualified individual whose promotion is not retarded by local lack of vacancies. And it favors the Army too, for the Army is in fact securing the advancement of those individuals best qualified for responsibility.

The implementation of this system can be fair to both the army and the individuals concerned—*but only if proper promotion criteria are established and correctly used.* Generally applicable to most grades, the criteria now considered are: Time in present grade; time in present position; length of service; job proficiency test; recommendation by commanding officer; and the enlisted efficiency report, the subject of this article.

The weights given to individual criteria are not made known to the field. A composite score representative of these criteria as applied to each applicant is computed by designated agencies. Then, based on a critical score established by the Department of the Army, the individual's place on the promotion list is determined by relative merit. In effect, we can say that this promotion system is aimed toward adding quality—and maintaining that quality—of the large number of fine noncommissioned officers already in the army. Or, to put it another way—strengthening the backbone previously mentioned.

The worth of that backbone will frequently dictate how difficult a commander's job is to be. It is conceivable that

it might be indicative of that comander's efficiency. Because, obviously, a platoon, company, or battalion staffed with highly qualified noncommissioned officers would reflect a degree of efficiency that would be totally absent from an organization whose noncoms must literally be led by the hand.

And so, as commanders, if for no other reason than a selfish desire to make our own jobs easier, we have a consuming interest to see to it that the orderly advancement of qualified enlisted personnel is conducted with accuracy and fairness.

Which brings us to the Enlisted Efficiency Report, a selection device which if properly used and administered can measure a man's true worth fairly and accurately.

It is a well known fact that professional knowledge is a basic requirement for any job. In the selection of noncommissioned officers, the technical aspect of knowledge is measured by job proficiency tests. But these tests in themselves are not enough. Something more must be learned about the man—his personal characteristics, his leadership ability, and how he gets along with others. A noncommissioned officer who has no sense of loyalty to his organization and superiors is no asset to the Army; neither is the noncom who cannot get along with his men.

It is this second portion of professional knowledge—personal characteristics, leadership, and the ability to get along with others—that the enlisted efficiency report is designed to measure.

Although there are other specific uses which can be made of the enlisted efficiency report (See AR 600-180 for details), its greatest potential value lies in its capacity to make an objective appraisal, other than technical aspects, of an individual's job performance. Since the results of a man's efficiency reports are entered on his qualification card (Form 20), it is possible over a period of time covered by different raters to approach a quantitative measurement of his true ability—his real worth as a noncom and subordinate leader.

ENLISTED EFFICIENCY REPORT

Fill out according to directions given in AR 600-180. Do not attempt to accomplish any part of this form until you have studied the instructions in AR 600-180.

SECTION I MAN REPORTED UPON BY UNIT ADJUTANT OR PERSONNEL OFFICER

LAST NAME	FIRST NAME	INITIAL

SERIAL NO	GRADE	MONTHS IN GRADE	PRIMARY MOS	DUTY MOS

REASON FOR REPORT	PERIOD COVERED BY REPORT FROM TO

UNIT, ORGNIZATION, AND STATION	REPORT DATE

DO NOT WRITE HERE	
1	2
3	4
5	6

SECTION V AUTHENTICATION BY RATER

I certify that I have read AR 600-180 within the past two months and have personally accomplished sections II, III, IV of this report in accordance with directions contained therein. GRADE

SIGNATURE

SECTION VIII AUTHENTICATION BY INDORSER

I certify that I have read AR 600-180 within the past six months and have personally accomplished sections VI, and VII of this report in accordance with directions contained therein. GRADE

SIGNATURE

SECTION II FOR RATER

	1	2	3	4	5
1. Takes proper action in absence of orders...	1	2	3	4	5
2. Takes an interest in his work.....	1	2	3	4	5
3. Is a good supervisor or would make one....	1	2	3	4	5
4. Maintains military bearing and demeanor..	1	2	3	4	5
5. Adds to morale of the Unit	1	2	3	4	5
6. Persistent in overcoming obstacles.....	1	2	3	4	5
7. Shows common sense and good judgment....	1	2	3	4	5
8. Requires very little supervision	1	2	3	4	5
9. Knows how to handle men.....	1	2	3	4	5
10. Commands respect of his fellow workers....	1	2	3	4	5

SECTION III FOR RATER

	1	2	3	4	5	6	7	8	9	10
1. How well does he understand what to do without detailed instructions?	1	2	3	4	5	6	7	8	9	10
2. How well does he get along with the other men in off duty situations?.....	1	2	3	4	5	6	7	8	9	10
3. How well satisfied are you with his work?.....	1	2	3	4	5	6	7	8	9	10
4. How well would he do "on his own"?	1	2	3	4	5	6	7	8	9	10
5. How well would he do at the next higher grade?	1	2	3	4	5	6	7	8	9	10
6. How well would you like to work in close personal contact with him?.....	1	2	3	4	5	6	7	8	9	10
7. How well would he be able to do his job under combat conditions?	1	2	3	4	5	6	7	8	9	10
8. How well could he take over for you in your absence?	1	2	3	4	5	6	7	8	9	10
9. How well do you like having him work for you?	1	2	3	4	5	6	7	8	9	10
10. How careful is he about the small details of his job?	1	2	3	4	5	6	7	8	9	10

11. Likes being in the Army	1	2	3	4	5
12. Strives for more knowledge and ideas	1	2	3	4	5
13. Cooperates well with fellow workers	1	2	3	4	5
14. Well grounded in all phases of Army life	1	2	3	4	5
15. Is able to lead	1	2	3	4	5
16. Lazy on the job	1	2	3	4	5
17. Does not accept criticism	1	2	3	4	5
18. Oversteps his authority	1	2	3	4	5
19. Gets moody and irritable	1	2	3	4	5
20. Gripes too much without reason	1	2	3	4	5
21. Alibis his mistakes	1	2	3	4	5
22. Gives up easily when faced with difficulties	1	2	3	4	5
23. Overestimates his ability	1	2	3	4	5
24. Resents Army discipline	1	2	3	4	5
25. Loses his temper	1	2	3	4	5

SECTION IV FOR RATER

1. Time rater has known man reported on.	2. Knowledge of man reported on.
3 to 5 months	Work in close association with him
6 to 8 months	Observe his work several times a week
9 to 11 months	Observe him at work about once a week
12 months and over	Seldom see him in a work situation

SECTION VI FOR INDORSER

1. Knowledge of man reported on.	2. Rating characteristics of the rater.
Work in close association with him	Tough rater. Has high standards for his subordinates
Observe his work several times a week	Tougher than many. Expects much of his subordinates
Observe him at work about once a week	Imparital rater.
Seldom see him in a work situation	Easier than most. Tends to overlook men's shortcomings
	Soft rater. Gives everyone a high rating

SECTION VII FOR INDORSER

1. How well does he fit into Army life?	1	2	3	4	5	6	7	8	9	10
2. How well do you like having him work for you?	1	2	3	4	5	6	7	8	9	10
3. How well would he be able to do his job under combat conditions?	1	2	3	4	5	6	7	8	9	10
4. How well could he take over for the rater in his absence?	1	2	3	4	5	6	7	8	9	10
5. How easy is he to handle?	1	2	3	4	5	6	7	8	9	10
6. How well would he do at the next higher grade?	1	2	3	4	5	6	7	8	9	10
7. How well does he take care of his personal equipment?	1	2	3	4	5	6	7	8	9	10
8. How well satisfied are you with his work?	1	2	3	4	5	6	7	8	9	10
9. How well does he meet unusual situations without emotional upset?	1	2	3	4	5	6	7	8	9	10
10. How well qualified is he to be a leader?	1	2	3	4	5	6	7	8	9	10

Figure 1.—Enlisted efficiency report.

Until the introduction of this Enlisted Efficiency Report, most ratings of noncomissioned officers on their character and efficiency were purely subjective and often hasty at that, sometimes being phoned to the clerk at personnel for equally hasty entry in the Service Record. They were often based purely on a general impression, and told us nothing except that we had a number of "superior" noncoms and a number of "excellent" ones. But who of the superior noncoms was in fact the best, was sometimes hard to say.

The Enlisted Efficiency Report you see in Figure 1 is designed to bring about a more objective appraisal of the man. Note, for example, each item in Sections II, III and VII of the report. Here the individual is rated on specific accomplishment rather than by some vague term such as "superior" or "excellent," which are the sort of descriptions which seem always to be at the lazy and indifferent rater's beck and call. The descriptive phrases in the report are much more meaningful than these lameducks, for here the rater is marking the man on actual, specific performance—hence his judgement is more objective. And objectivity is provided in another way—by requiring ratings in different degrees; five different degrees to be considered in Section II, and ten different degrees to be considered in Sections III and VII. (See Figures 2 and 3).

Through research and testing procedure it has been established that out of a representative group of individuals being rated on human qualities, the bulk of them would be placed in the central portion of the rating scale, while the number in the other points of the scale would decrease until we had a very few at the highest point of the scale, and a very few at the lowest point on the scale. This is known as a normal curve.

The Enlisted Efficiency Report tends to "force" a normal curve. The rater, in rating an enlisted man, must consider all the men of the same grade and experience with respect to the item being rated. This is done by placing all these men on a list in order of relative merit; the man possessing or exhibiting the trait in the highest degree is placed first, and then the others in descending order until the

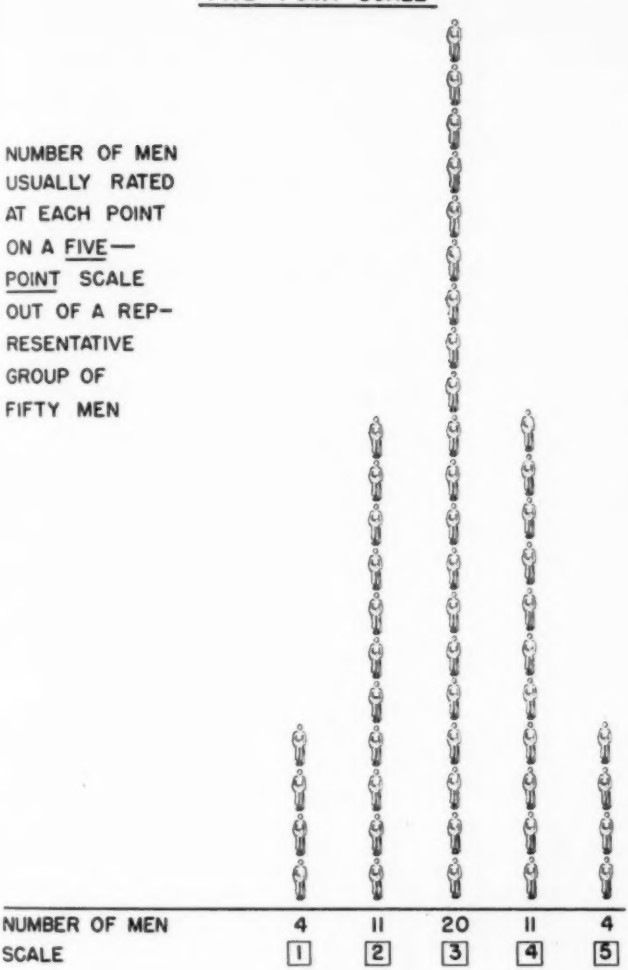

FIVE—POINT SCALE
NUMBER OF MEN USUALLY RATED AT EACH POINT ON A FIVE—POINT SCALE OUT OF A REPRESENTATIVE GROUP OF FIFTY MEN
NUMBER OF MEN 4 11 20 11 4
SCALE 1 2 3 4 5

Figure 2. Five-point Scale.

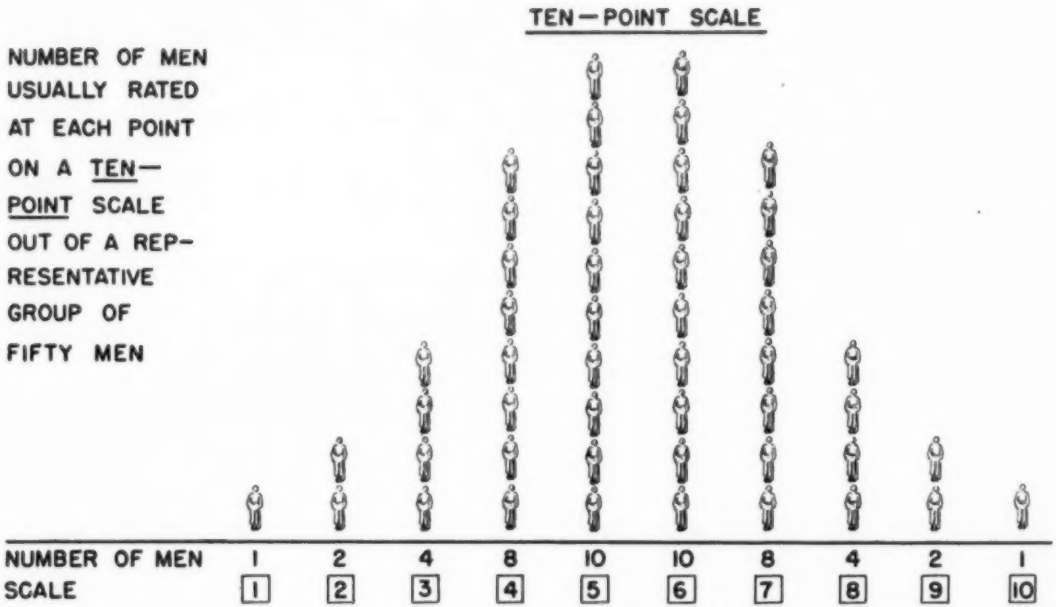

TEN—POINT SCALE
NUMBER OF MEN USUALLY RATED AT EACH POINT ON A TEN—POINT SCALE OUT OF A REPRESENTATIVE GROUP OF FIFTY MEN
NUMBER OF MEN 1 2 4 8 10 10 8 4 2 1
SCALE 1 2 3 4 5 6 7 8 9 10

Figure 3. Ten-point Scale.

man who has the trait in the lowest degree is at the bottom of the list. The individual under consideration would then be placed in his relative position with respect to the other men. For example, Item 2, Section II, is: "Shows an interest in his work." Thus if the rated individual were seventh from the top out of a representative group of 50 men, he would be placed at point 4 on the scale, which indicates that he has this particular trait in a fairly high degree. If he were number 3 from the top out of a representative group of 50 with respect to Item 20 ("gripes too much without reason"), he would be placed at point number 5 on the scale, again indicating that he has this trait in a high degree. It is important for raters to remember that the scale represents the degree in which each particular trait is present in the individual, and that the *highest degree* is at point 5 on the scale, whether the trait is a desirable or undesirable one.

The ten-point scale for Sections III and VII is used exactly the same as the five-point scale for Section II, the one difference being that there are fewer individuals at each point on the scale, and thus the ratings tend to be more discriminating.

The ratings are worthless, of course, unless the rater himself is trained properly to prepare the report and to guard against the common rating errors. Too often raters tend to rate on a general impression; they decide in their own minds that a man is "superior," "excellent," "poor," etc., and then rate the individual on that general impression. Thus a man who is considered superior is given a high rating on all items rather than considering that individual with respect to each particular item. This is a common rating error known as the "halo" effect.

This "halo" effect, hand in hand with prejudice, varied standards, and the tendency to rate "down the middle of the road," are present in most evaluation devices and seriously affect their validity. Many pages could be written about the " human element" in rating; they would boil down in the end to the fact that after design of the device, our

principle means of minimizing their effect is to train our raters to guard against these common errors.

The administrative procedures governing preparation and submission of the Enlisted Efficiency Report are covered in AR 600-180, which additionally serves as the basic guide for the training of raters and indorsers. In this respect, particular attention should be given to the rules in paragraph 8*c* of this regulation.

Through design of the report *and* through the training of our raters we obtain objectivity in the rating of our noncommissioned officers. This was previously lacking in the judgment of their human qualities. And with this objectivity we come closer to a quantitative measurement of the man concerned—closer to a valid yardstick for accurately measuring performance. As such, the Enlisted Efficiency Report is a highly effective and useful instrument in strengthening the backbone of the Army—the noncommissioned officers.

Training Literature News

Recent changes in material, and the need for more time to complete illustrations, have compelled a rescheduling of the printing dates on some of the Field Manuals listed in the October 1949 issue of the QUARTERLY.

Changes have been made on the printing dates of the following manuals:

FM 7-17, THE ARMORED INFANTRY COMPANY AND BATTALION—previously scheduled for November 1949, changed to February 1950.

FM 23-90, 81-MM MORTAR M1 — previously scheduled for November 1949, changed to March 1950.

FM 71-20, AIRBORNE TECHNIQUES FOR DIVISIONAL UNITS — previously scheduled for January 1950, changed to April 1950.

TM 71-210, AIR TRANSPORT OF TROOPS AND EQUIPMENT — previously scheduled for December 1949, changed to April 1950.

FM 71-15, PARACHUTE MAINTENANCE COMPANY has been cancelled. Instead, the new FM 71-20, AIRBORNE TECHNIQUES FOR DIVISIONAL UNITS will carry a chapter on the Parachute Maintenance Company.

The Infantry School has prepared a Training Circular, GUNNER'S EXAMINATION, 4.2-INCH MORTAR, which is now being reviewed by Office, Chief, Army Field Forces.

Previously announced dates for completion of other training literature are still in effect.

Letters to the Editor

14 Oct 49

Editor, The Infantry School Quarterly:

Several articles in the Quarterly (including "Night Attacks," April 1949, and "Rifle Platoon in Defense," October 1948) have referred to the support platoon of the rifle company in such a way as to imply it is actually considered the reserve platoon. My copy of FM 7-10 is dated June 1944, and it also discusses support platoons and support squads in the same manner.

In the attack, does the support platoon give fire support to the assault platoon, or does it stay in a covered position until the company commander orders it into action? In the defense, does it organize firing positions in support of the front-line platoons? Does a company commander ever hold out a reserve in addition to the support platoon?

The Quarterly articles are interesting and informative. I have particularly enjoyed the combat examples of small-unit actions.

Capt, Inf Res

The commander of any unit, large or small, usually holds out a reserve at the beginning of any action, either offensive or defensive. He thus retains a decisive means of influencing the action while it is in progress. The more obscure the situation, and the more contingencies he must be prepared to meet, the greater the proportion of his unit he holds in reserve initially.

In units of company size and smaller, the reserve is called the support. We do not have *both* a reserve and a support within the same unit. A rifle company may have

one or two rifle platoons in support. A rifle platoon in attack may have one or two rifle squads in support.

In attack, the support platoon occupies a covered position or moves by a covered route, within close *supporting distance* of the assault platoons. It does not ordinarily engage in the fire fight until the company commander employs it as an assault platoon. Similarly, a support squad does not become involved in the fire fight until the platoon leader employs it as an assault squad. Within the company, *fire support* comes from the weapons platoon, and within the platoon from the weapons squad.

In defense, a front-line rifle platoon organizes its position with all three rifle squads abreast, so that all men have a field of fire to the front or flanks. This is simply because, in an area as small as a platoon defense area, all men will almost certainly become involved in the fire fight anyway, so it is inadvisable to designate a support squad. Flexibility and depth are achieved within the platoon through supplementary squad positions. A front-line rifle company distributes part of its strength in depth by organizing a support platoon area. Since defense areas are mutually supporting, the support platoons are placed to give fire support to the front-line platoons. However, support platoons have more freedom of action than platoons on the MLR. They may organize more than one position, and shift to meet the most dangerous threat during the conduct of the defense. The company commander may also use a support platoon to conduct mopping-up action.

A front-line battalion also organizes its defense area so that the reserve rifle company can give depth, all-around defense, and flexibility to the battalion defense area, as well as carry out other missions of a battalion reserve.

For further discussion of these principles see COMBAT TACTICS OF THE RIFLE PLATOON, published in the October 1947 QUARTERLY.

26 October 1949

Editor, the INFANTRY SCHOOL QUARTERLY:

I have just received the October edition of the QUARTERLY and am in the process of reading it. I have several questions:

1. THE NEW RIFLE MARKSMANSHIP COURSE, page 9, Figure 3, Table III, states that the hasty sling is used in the prone from standing position. Is this a misprint or a radical change?

2. Since the sitting position has been dropped from the M1 course, in addition to many other sound methods, has the carbine course been changed or is it being considered for change in conjunction with the new rifle marksmanship principles?

3. Is there any information available on the new lightweight M1 Rifle?

4. The article on the Lesson Plan (page 76) has caused raised eyebrows among the instructors in the Training Methods Department here at the Leaders' Course. Personally I think it is very common sense. However, the instructor who teaches the lesson plan to the Leaders' Course students practically had a conniption fit. He claims 'tain't' according to TM 21-250, ARMY INSTRUCTION.

5. Are any changes in the making for TM 21-250?

6. What is The Infantry School definition of Leadership?

1st Lt., Infantry

Lieutenant, you've caught the QUARTERLY in an error. In Table III of the New Rifle Marksmanship Course, firing at 300 yards and going from the standing to the prone position, the firer uses the *loop* sling and not the *hasty* as the table now indicates. Right below that there is another mistake. In the top line of Table IV, firing at 100 yards from the standing position, the firer uses the *hasty* sling and not the *loop* as we have it shown. Apparently those

two lines were transposed somewhere in the printing process.

In considering possible changes in the Carbine Marksmanship Course The Infantry School reached the conclusion that the present course is adequate.

A new lightweight rifle is under study but no information on it is presently available because of its security classification.

About the Lesson Plan shown in the October 1949 issue: The Infantry School refers you to Paragraph 19, TM 21-250. It says that the lesson plan form that will best meet the needs of the instructor may vary from one situation to another. The Lesson Plan example shown opposite page 76, in our last issue is *one* form that might be used by *one* instructor. Another instructor might use a different form.

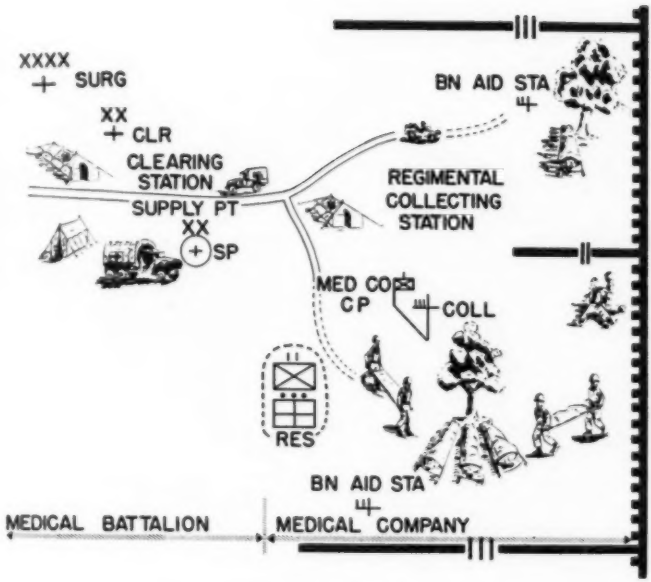
FM 21-5, MILITARY TRAINING, is now under revision and when it appears will supersede TM 21-250. This new version will show a sample lesson plan which does not require that each stage of instruction be written in the lesson outline as illustrated in the current manual. The lesson plan illustrated in the QUARTERLY is an example of what an instructor might prepare in conforming to the new manual. The new FM 21-5 should appear this coming Spring.

For your last question, The School has a short definition: Leadership is the technique of inducing others to cooperate to achieve a common goal.

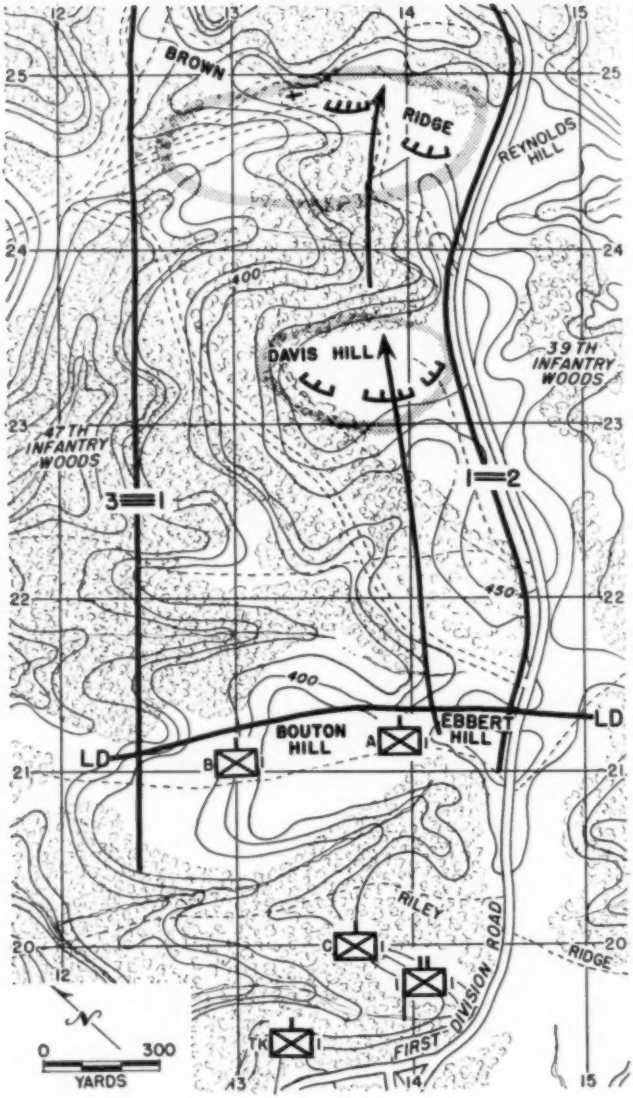
Thank you for your letter. We appreciate your alertness in detecting the error in the Rifle Marksmanship Course and for calling it to our attention.

Extra Illustrations for Your Convenience

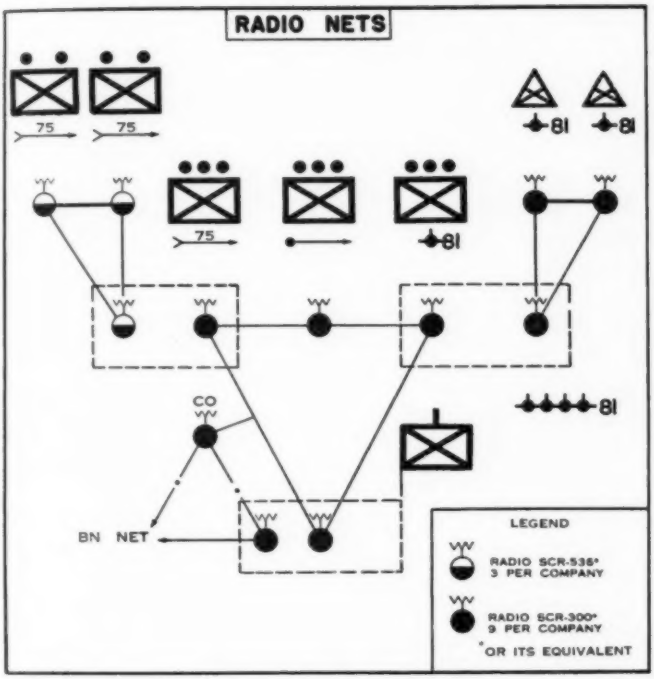
In the last four pages of this volume, we are reproducing illustrations which our instructor-readers may find a handy visual aid in some period of their instruction. It won't ruin your book to clip them out. They can be used in direct-projection machines or enlarged by your unit artist.



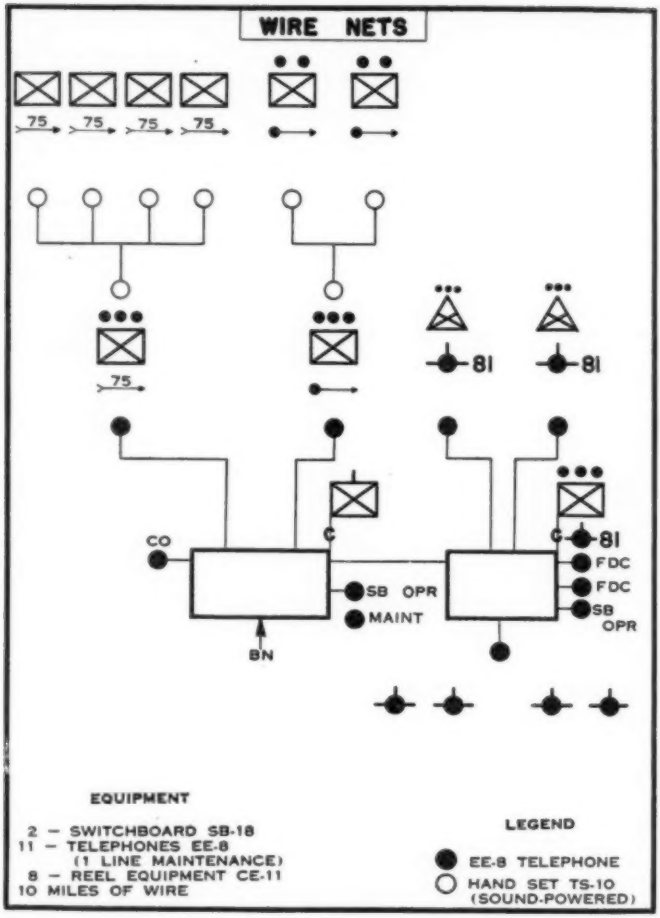
Medical Company Chain of Evacuation.



Map for Problem—"Rifle Company in Attack."



Heavy Weapons Company Radio Nets.



Heavy Weapons Company Wire Nets.

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